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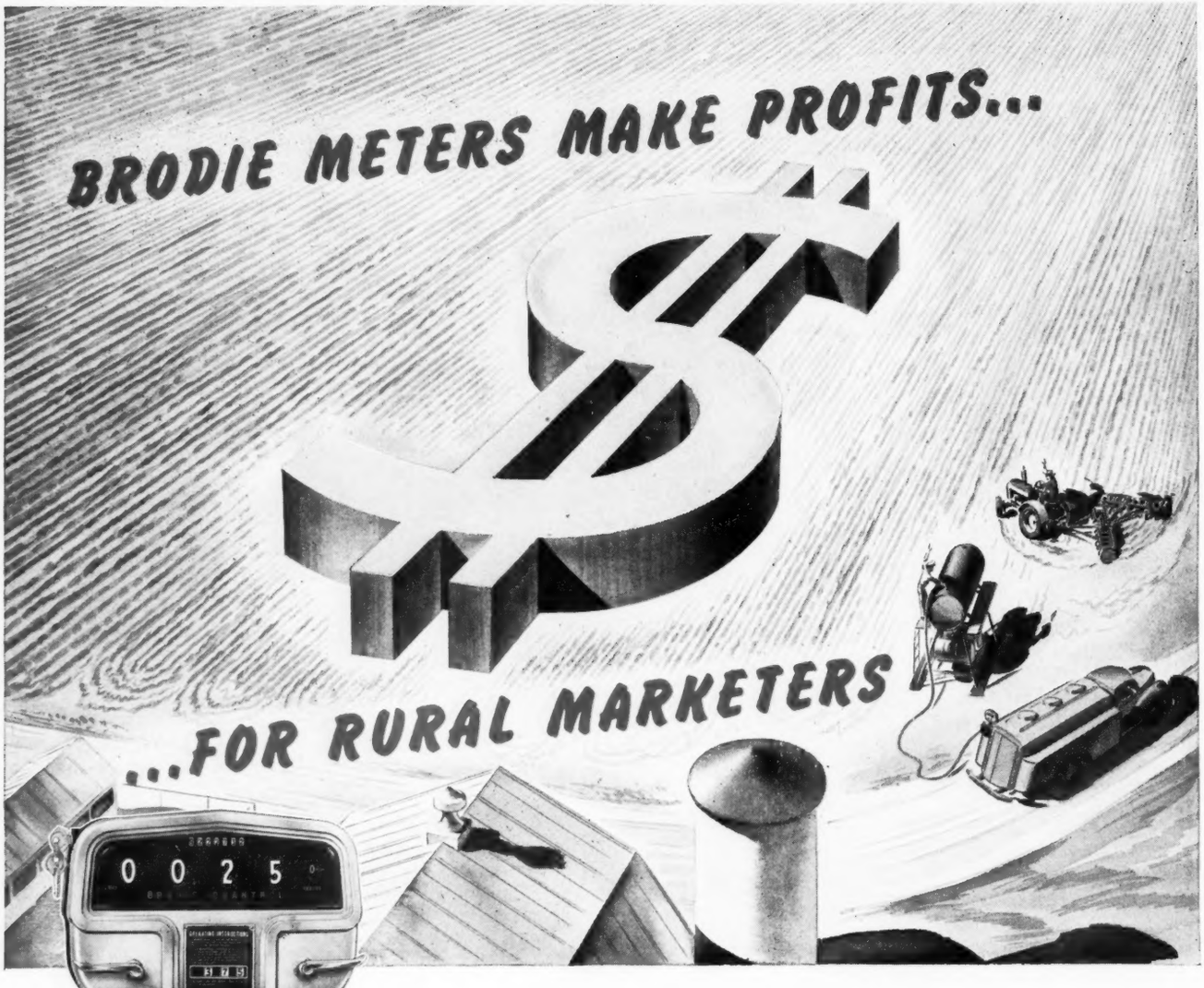

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PETROLEUM METERING EXCLUSIVELY

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Time means money, particularly when you compare delivery costs per gallon, today, with total daily gallonage handled. By adopting Brodie Quantrol Meters you can materially increase the delivery capacity of each operator and each tank truck, and at the same time greatly reduce errors, spillage and loss of time, product and physical effort. The savings that you effect with Brodie Quantrol Meters add up to greater profits per gallon. Brodie Quantrol Meters are preset to the exact predetermined gallonage to be delivered. Then, all any operator has to do is to merely open the valve. When the exact quantity has passed through the Meter the valve shuts off, automatically. Consider the multiple benefits you will derive from Automatic Metered Delivery Control. Investigate fully today. Write for full details.

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REPRESENTATIVES AND STOCKS IN ALL PRINCIPAL CITIES

VOL. 6, NO. 3

fueloil & oil heat

JULY

1947

Names in the News

Leland W. Shaw, purchasing agent for the past two years for Harvey-Whipple, Inc., Springfield 1, Mass., has advanced to the position of assistant sales manager. Mr. Shaw joined Harvey-Whipple after having been associated with Westinghouse Electric Manufacturing Co., and has had extensive experience in sales and procurement contact work.

James H. Binger has been elected assistant vice president, Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. In his new duties he will devote his attention to the sales department, assisting Thomas McDonald, sales vice president. Mr. Binger has been assistant secretary of the company since 1945 and formerly was with a Minneapolis law firm. He joined the company in 1943 to assist in legal and contractual work in connection with Honeywell's war work.

John W. Frazier is general sales manager for Trion, Inc., McKees Rocks, Pa. He will direct all sales and promotional activities of the company, which is building a domestic and commercial electric air filter, designed for use with warm air heating systems.

C. Thomas Miller has succeeded to the position of eastern regional manager of appliance sales, Rheem Mfg. Co., and will make his headquarters in New York. He replaces W. W. Stevens, resigned. Mr. Miller joined Rheem in 1942, assigned to Baltimore, and became manager of that

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One more way General Automatic is building volume for dealers in protected territories.

COMPACT integrated unit.

THREE SIZES with heating capacities 100,000, 150,000 and 200,000 BTU's per hour.

HEAVY STEEL casing beautifully finished.

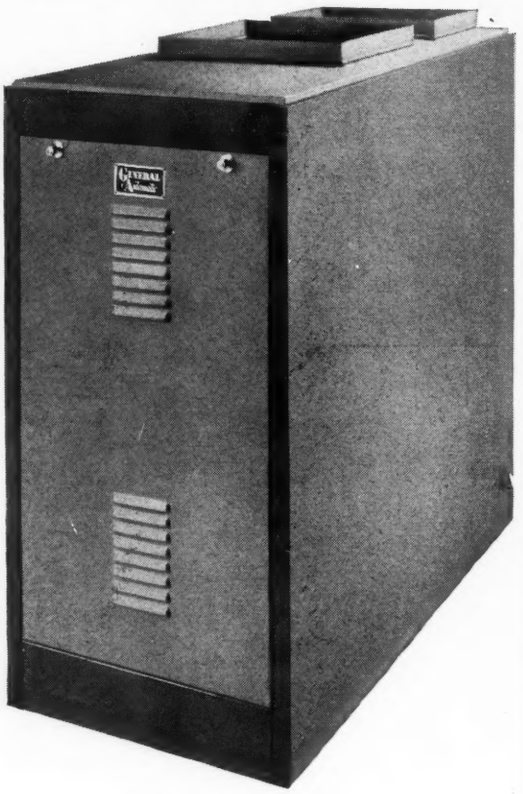
INCLUDES oil burner, furnace, blower, filters and controls.

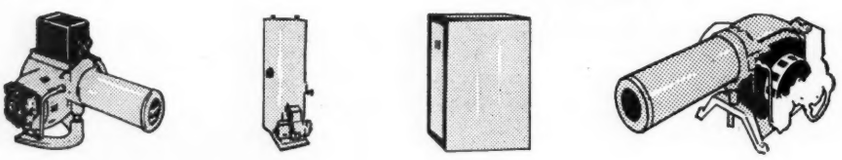
AMPLE SIZE blower fan!

EASY SERVICING with detachable oil burner unit flange mounted to front of heating chamber.

REASONABLY priced.

IMMEDIATE shipment.





GENERAL Automatic

. . . . . CHECKS FIRST WITH THE FINEST

GENERAL OIL BURNER CORP. 2300 SINCLAIR LANE BALTIMORE 13, MD.

A Complete Family of Oil Heating Equipment

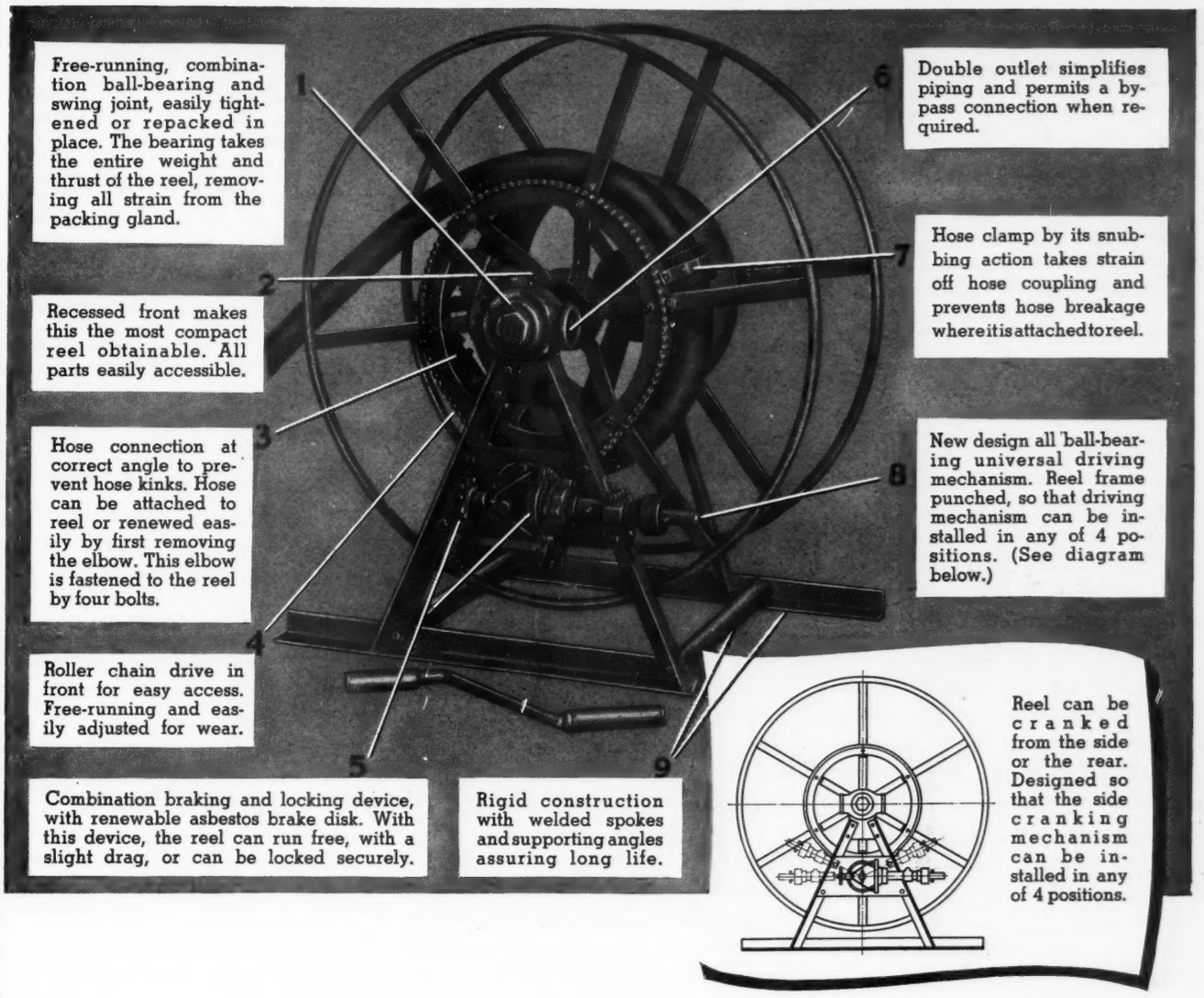
district in 1945. He transferred to the New York office in February 1946 as assistant to the general manager of appliance sales.

Darcey U. Wright has been appointed district representative, Williams Oil-O-Matic Div. Eureka Williams Corp., Bloomington, Ill. His territory includes Utah, southern Idaho, western Wyoming, eastern Nevada, western Colorado and northern Arizona, with headquarters in Salt Lake City. A major portion of his experience in the oilburner field was with Red Feather Oil Co., Salt Lake City, where he was co-owner, sales manager, secretary, treasurer and a director. Mr. Wright was enlisted for two years in the U. S. Marine Corps Air Service.

J. G. Van Nest, who at 36 has 19 years of service with the company, has been named assistant to the purchasing agent at Mack Truck Company's Allentown, Pa., plant. He joined Mack in 1928 at its Plainfield, N. J. plant as a purchasing department clerk, and progressed to assistant to its purchasing agent.

T. J. McIntyre has joined the sales staff, Viking Air Conditioning Corp., Cleveland 2, Ohio. He will be in charge of sales in Indiana, southern Illinois, and Missouri.

B. A. Johnson has joined Condensation Engineering Corp., Chicago, and will be active in administrative and consulting work. Mr. Johnson formerly was with Minneapolis-Honeywell Regulator Co. where he had been assistant to the engineering vice-president. Condensation Engineering manufactures Vitroliner chimney and chimney liner and breeching pipe. Vitroliner, made of heavy gauge steel with two coats of porcelain enamel, is again available, according to the company.


1
Free-running, combination ball-bearing and swing joint, easily tightened or repacked in place. The bearing takes the entire weight and thrust of the reel, removing all strain from the packing gland.
2
Recessed front makes this the most compact reel obtainable. All parts easily accessible.
3
Hose connection at correct angle to prevent hose kinks. Hose can be attached to reel or renewed easily by first removing the elbow. This elbow is fastened to the reel by four bolts.
4
Roller chain drive in front for easy access. Free-running and easily adjusted for wear.
5
Combination braking and locking device, with renewable asbestos brake disk. With this device, the reel can run free, with a slight drag, or can be locked securely.
9
Rigid construction with welded spokes and supporting angles assuring long life.
6
Double outlet simplifies piping and permits a by-pass connection when required.
7
Hose clamp by its snubbing action takes strain off hose coupling and prevents hose breakage where it is attached to reel.
8
New design all ball-bearing universal driving mechanism. Reel frame punched, so that driving mechanism can be installed in any of 4 positions. (See diagram below.)
Reel can be cranked from the side or the rear. Designed so that the side cranking mechanism can be installed in any of 4 positions.

The New Hose Reel You Have Been Looking For

COMPACT, RUGGED, LIGHT IN WEIGHT, BALL-BEARING CONSTRUCTION THROUGHOUT

The New Philadelphia Valve Co. reel is the finest reel built. It is compact, rugged, and light in weight. All parts are of steel, malleable iron, or bronze; no cast iron is used. It is ball-bearing throughout with hardened and ground races. (6 ball bearings are used.) It will never wear out.

The reel can be changed from top winding to bottom winding by reversing the hose connection and rotating the drum. All working parts and hose connections are in front and easily accessible. It is light in weight, a reel that holds 100 feet of 1½" hose, weighs only 93 pounds.

We can furnish hose reels in any size or shape. They can be furnished for installation either in bucket box at rear of truck or in underslung box on side of truck. Give inside dimensions of box when writing for information. Special reels can also be furnished for Airfield Refueling Pits and Ship Docks.

Delivery can generally be made in a few days after receipt of order. For sizes, prices, and dimensions, write for Catalogue No. 165.

PHILADELPHIA VALVE COMPANY
ARAMINGO AVENUE AND ONTARIO STREET, PHILADELPHIA 34, PA.

Oil Marketing Equipment Company, 321-325 Fremont Street, San Francisco 5, California

fueloil & oil heat

Editorial Leaks

One enterprising dealer has become convinced that there is something that smells of fish in the talk of an oil shortage, and maybe the fishy smell is Russian caviar. He has dug up the information that oil exports to Russia are at an all-time peak; that Russia is paying a premium which makes it attractive to American oil companies to export oil, and further, the money represents credits allowed Russia by the U. S. government.

There is no way quickly to check these allegations, but the dealer has turned the information over to his Congressman with a request that something be done about it. The man is right, though his reasons may not be.

The chief shortage that threatens us is one of steel, rather than of oil as such. We need steel for new refineries and particularly for more pipelines to bring crude from the fields to these refineries and to carry products away. Last year, according to Dr. Robert E. Wilson of Standard Oil of Indiana, we shipped 30,000 tons of seamless and welded pipe to Russia. Any appreciable part of that would have gone far toward alleviating the threatened shortage in a number of Midwestern communities.

Unfortunately, Russia never seems to veto shipments of dirty, capitalistic steel and oil.

◈

Petroleum product demand now is at an all-time high, and still expanding, while refining equipment, pipelines, terminals and other oil handling equipment capacity is not much greater than before the war. The demand is 28% greater now than in 1941.

A daily average of 5.2 million barrels of oil will be needed to satisfy this year's demand in the United States. That is 6% higher than the previous peak last year of 4.9 million barrels a day, and is 7% above the maximum need of any of the war years. By 1951 the daily requirements are estimated to be about 6 million barrels a day, an increase of 23% over 1946.

Nobody doubts that we will have the crude oil for this year's demand, or that of 1951. It can be produced, but the problem is to get it refined, transported and stored ahead of the actual need. To solve that problem is to solve the entire present oil shortage situation.

◈

Reports, too persistent to be ignored, continue to indicate a drive by major suppliers for retail fueloil customers during the wave of widespread publicity on a coming fueloil shortage. Frightened users are susceptable to the plea that major oil companies with retail departments will be more likely to have oil in a period of short supply than independents who are not associated with refining capacity. The reports say that the majors' retail departments are taking on new customers at a relatively high rate, while the wholesale department is warning independents that they can have only the same gallonage they had last year plus, in some cases, a small percentage of increase.

Nobody knows better than the men in the front office at the major oil companies the implications of such a policy; or the implications of such practices, whether or not they are dictated by policy. In days when small business is practically sacred in high places, any such vicious attack on an independent for the benefit of a major might be hard to explain.

Many independent fueloil distributors also know how vulnerable major oil companies are to attack in some quarters, and are keeping close records of the customers and gallonage that change hands in this period. Some threaten to scream and beat on the door if they find that majors' retail gallonage is allowed to increase by a greater percentage than they are allowed to increase their wholesale purchases from those majors.

Responsible men in major companies might avoid acute embarrassment in the future by checking their retail fueloil departments now.

Twenty Years Ago

(*July issue, 1927*)

The petroleum industry is in a most difficult condition because of current overproduction, President E. W. Clark of the American Petroleum Institute told the Standardization Conference. He warned that the outlook for greatly increased production in other parts of the world—Russia, South America and the Middle East—had brought the world petroleum industry face to face with conditions that dwarf local and temporary U.S. overproduction.

Two new plants that increase manufacturing space 26% have been bought by the Honeywell Heating Specialties Co., at Wabash, Ind. The company has four plants.

M. E. Simpson, vice-president of Electrol Distributing Corp., New York, has been elected a director of Electrol, Inc., of Missouri, St. Louis.

R. K. Lindsay has joined Electrol of Missouri with headquarters in New York. Formerly he was with Northern Machinery Co., and more recently with Marr Oil Heat Machine Co.

American Radiator Company has opened a new plant at Springfield, Ill.

Recently published lists show 72 oil-burners now listed by the New York City Board of Standards and Appeals.

New York's new Paramount Building, which houses the Paramount Theatre and 30 stories of office space, is heated by a battery of six Todd mechanical pressure burners. The building has a standing steam load of 49,000 sq. ft.

Updike Lumber & Coal Co., one of the largest coal dealers in Omaha, Neb., has installed 100,000 gallons of bulk storage for domestic fueloil. F. W. Hanley is in charge of oil sales.

Silent Automatic's Boston branch is believed to have set a new record for oil burner retail sales. During the week of May 28 the branch sold 108, and followed the next week with 110 retail sales, all of which carried a cash deposit.

Johns Hopkins University, Baltimore, has been named to carry on part of the research program of Oil Heating Institute under the direction of James L. Breese, Jr., head of the Research Committee.

Ballard Service Corp., Boston, has become New England distributor for 28-32 degree oil for Beacon Oil Co.

there are Whistles and Whistles!

Trust any woman to listen when she hears a whistle! But with VENTALARM® installed on household fuel oil tanks, it's your driver who attracts the favorable attention every time.

Customers like VENTALARM because it eliminates annoying interruption when the oil man calls. Householders are freed to come and go as they please — the driver need never enter the home.

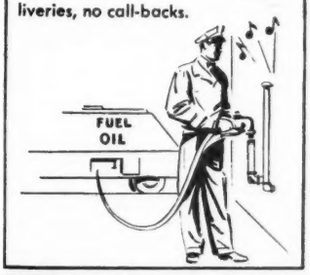
You save time too, on VENTALARM-aided deliveries. Each stop becomes a drop — no non-deliveries, no call-backs. Drivers cut 5 to 7 minutes per delivery; you slash 20 to 30 per cent from labor and operating costs during the season.

There's still ample time to gear your Fall sales campaign to VENTALARM installation. Cost is low to equip both new tanks and existing installations. You can purchase VENTALARM Signal through your favorite supply house.

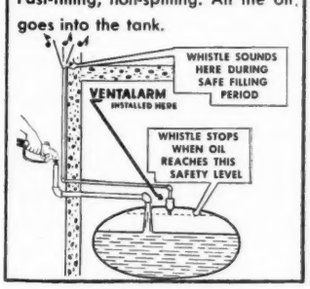
Driver need never enter the home — complete convenience for housewife.

Ventalarm means more deliveries — more time saved.

Every stop a drop — no non-deliveries, no call-backs.



Fast-filling, non-spilling. All the oil goes into the tank.


WHISTLE SOUNDS HERE DURING SAFE FILLING PERIOD
VENTALARM
INSTALLED HERE
WHISTLE STOPS WHEN OIL REACHES THIS SAFETY LEVEL

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Model LC
— for existing installations

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"Whistling" TANK FILL SIGNAL
SCULLY SIGNAL COMPANY
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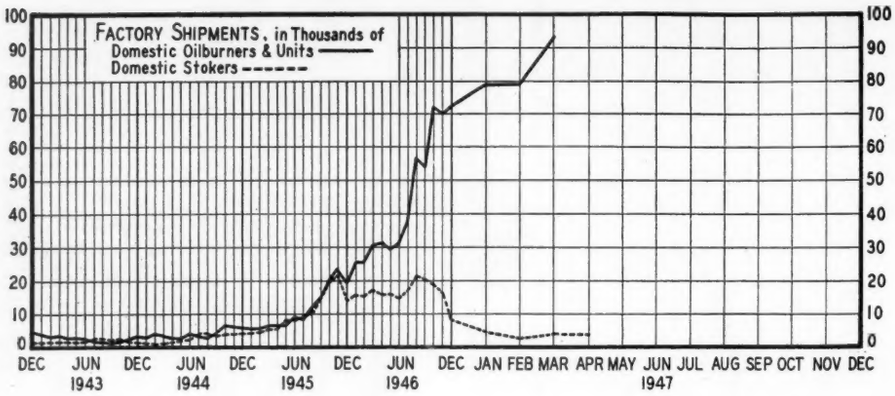
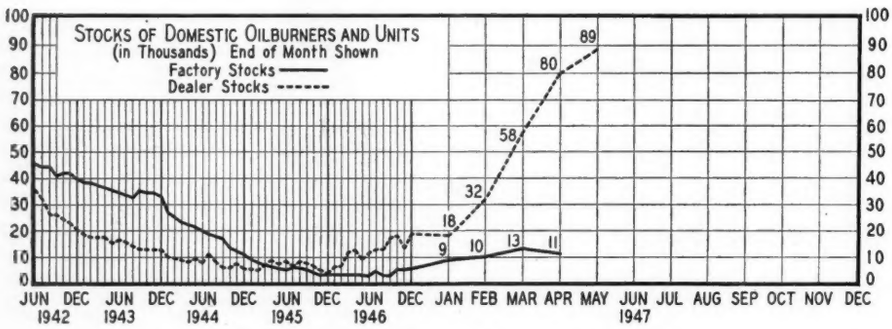

FACTORY SHIPMENTS, in Thousands of
Domestic Oilburners & Units ——
Domestic Stokers ------
DEC JUN 1943 DEC JUN 1944 DEC JUN 1945 DEC JUN 1946 DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC 1947

Shipments of Oilburners and Units

(Including Exports)

Adjusted to include manufacturers other than the 162 reporting to Census Bureau, FUELOIL & OIL HEAT's estimates of shipments are:

	MARCH			THREE MONTHS		
	1947	*1946*	*Percent Change*	*1947*	*1946*	*Percent Change*
Conversion	73,972	27,317	+170.8	205,056	74,573	+175.0
Boiler units	3,261	1,788	+ 82.3	10,116	3,050	+231.7
Furnace units	16,290	1,501	+985.2	38,087	4,225	+801.4
All domestic	93,523	30,606	+205.5	253,259	81,848	+209.4
Commercial	4,836	2,126	+127.4	14,165	6,724	+110.6
Total	98,359	32,732	+200.4	267,424	88,572	+201.9

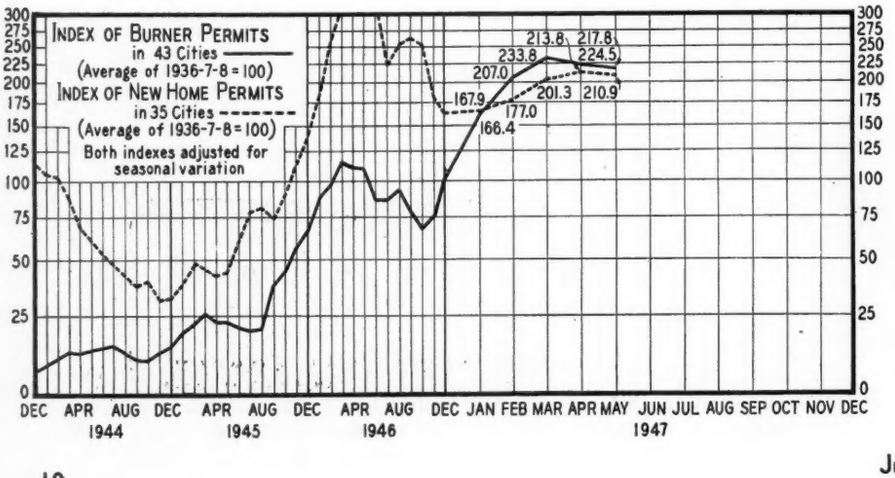


May Minimum Retail Prices: Key Dealers

	CONVERSION BURNERS	BOILER-BURNERS	FURNACE BURNERS
Highest	$500	$980	$900
Lowest	285	499	450
May Aver.	349	690	594
Apr. Aver.	352	691	600

Price Index: Conversion Burners: January 1940 is 100%

WHOLESALE				RETAIL			
May	152.0	Six months ago	156.7	May	146.0	Six months ago	147.7
April	159.1	Year ago	125.7	April	145.7	Year ago	132.3



Oilheating Trends

ESTIMATED INSTALLATIONS of domestic oilburners and units in May were 79,468, substantially above April, and bringing the total for the first five months of the year to 252,042. This is 80% above the 139,793 installed in the same period of 1946. The May upsurge was apparently due to a combination of causes, one being that a lot of families who had ordered burners last year refused to accept installation in January or February because they had coal on had, but would take the burner at the season's end, particularly when they saw prices well stabilized or slightly downward.

New orders booked by dealers in May, however, were only 40,484, or about half as many as there were installations. Total orders takin in the five months were 162,892, almost identical with orders booked in the same period of 1946, when there were 162,702.

BURNER STOCKS: Stocks of domestic oilburners and units in the hands of dealers on May 31 were approximately 88,770, a new high point for month-end reporting. On a study made for another purpose on May 10, however, it was indicated that at that particular time of the month dealer stocks reached 100,620 burners and units, clearly an all-time high. A little less than half of those burners in stock had been sold and were awaiting installation. The table shows May 10 dealer stocks of burners, sold and unsold, by areas:

Stocks of Burners and Units

	Sold	*Unsold*	*Total*	*% of U. S.*
New Eng.	8,081	9,675	17,756	18
Mid-Atl.	20,535	24,678	45,213	45
Sou. Atl.	2,167	4,200	6,367	6
Midwest	11,010	12,929	23,939	24
Pacific	3,828	3,517	7,345	7
Total	45,621	54,999	100,620	100

Factory stocks at the end of March, the latest available data, were 13,210. There's very little indication of inventory building at this level, although most manufacturers expect some bulge in factory stocks not later than mid-summer.

SERVICE INCOME: Service department income of reporting dealers during May averaged $2,300, up 12% from $2,055 reported by the identical dealers for the same month of 1946. April income had averaged $2,478; March was $2,662.

ORDER BACKLOGS: In spite of the large oilburner stocks building up in dealer warehouses, there are still quite a few dealers who do not yet get from their factories the burners they need to fill all orders promptly. Their total number of orders, on which installation is deferred awaiting a burner, is relatively small, apparently around 20,000 for the entire country. The shortages are primarily among big-name burners, for certainly anyone can get all he wants if brands are no consideration. The table shows the per cent of dealers in four principal oilheating areas who need more burners to fill present orders, and the indicated total number that they need. In other words, on May 31 New England dealers had orders for prompt installation of 4,953 more burners than they had available; other areas as shown.

	Per cent of Dealers Still Short Burners	*Indicated Total Shortage*
New Eng.	29	4,953
Mid Atl.	22	4,791
Midwest	40	4,756
Pacific	69	5,047

CONVERSIONS FROM GAS: The gas shortage in some areas last season brought lessened enthusiasm for that fuel and this was particularly prevalent in Mid-Atlantic new home developments where gas is high priced. In the Mid-Atlantic States about 400 gas users switched to oilheating during the spring months. From no other section of the country is such activity reported, so it is apparently of negligible proportions. Of course, in the Midwest it is well known that a lot of commercial and industrial gas users are doing their best to convert to oil to be sure of keeping their businesses going.

BURNER SERVICE CONTRACTS: Burner service activity will be considerably expanded this summer over last, with nearly half of all oilburners getting a cleaning and tune-up job—48% compared with 39% last summer. That many had been ordered or signed for by May 31, so obviously the total will rise some. Annual service contracts signed for the 1947-48 season represent 30.7% of all oilburners, while in addition 17.5% will get the summer cleaning only, leaving subsequent service needs on a call basis. The comparison last year was 16% contracts and 23% getting summer jobs only.

Prices for annual service contracts are up moderately from last year. Those including no parts average $17.28, when weighted for number of customers, or on a simple average by number of dealers, $16.00. Contracts including parts, weighted by customers, averaged $18.72, and unweighted, $19.00.

FUELOIL CONTRACTS: For the past heating season, 1946-47, about 45.4% of oilheating users signed fueloil contracts. To June 1 of this season 43.9% had signed contracts, indicating that the total will probably run a little higher than last season, but not much higher inasmuch as the contract signing season was at its peak in May in most parts of the country. Approximately 54% of the country's fueloil distributors are taking contracts. Of those dealers taking contracts, four-fifths say that they are ahead of last year at this date in number signed.

Of all contracts received by the reporting fueloil men, 78% are for keep-filled automatic delivery service.

DEALER COMMENTS: Typical of dealer remarks on questions of the month: "Postcard burner prices are lowered to $89 and $87.95, but since June 1 the brand burners tend upward due to exporting."

Oilburner* and Building Permits

	OILBURNERS				DWELLINGS			
	May		5 MONTHS		May		5 MONTHS	
	1947	1946	1947	1946	1947	1946	1947	1946
Baltimore, Maryland	..	..	..	..	176	549	929	2034
Binghamton, New York	..	..	..	..	15	11	39	42
Boston, Massachusetts	..	..	..	..	74	7	168	94
Bridgeport, Conn.	81	63	453	241	..	..	..	..
Buffalo, New York	..	..	..	..	23	31	73	103
Des Moines, Iowa	..	..	..	..	112	156	..	488
Detroit, Michigan	..	..	..	..	649	808	3612	4609
Elizabeth, N. J.	51	56	159	168	13	..	..	..
Freeport, New York	78	43	147	134	..	..	..	..
Greenwich, Conn.	..	..	..	..	12	10	63	75
Hackensack, N. J.	..	..	..	..	0	16	14	43
Hartford, Conn.	184	71	757	302	..	..	..	..
Irvington, N. J.	56	81	168	193	1	1	10	7
Lynn, Massachusetts	..	..	..	..	15	7	41	26
Meriden, Conn.	31	22	116	72	..	..	..	..
Milwaukee, Wisc.	..	..	..	..	149	227	425	813
Minneapolis, Minn.	95	61	586	230	84	125	315	825
Montclair, N. J.	25	55	113	166	..	..	..	..
Mt. Vernon, New York	50	61	156	186	..	..	..	..
New Bedford, Mass.	56	39	289	229	..	..	..	..
New Haven, Conn.	88	52	279	137	..	..	..	..
New Orleans, La.	0	0	0	0	..	..	..	..
New Rochelle, N. Y.	26	32	116	102	9	6	27	61
Manhattan, Bronx, Rchd	892	586	3938	2307	..	..	..	..
Norfolk, Virginia	82	16	421	121	33	22	140	99
Oakland, Calif.	1	1	8	2	..	..	..	..
Omaha, Nebraska	239	68	582	311	65	104	251	370
Orange, New Jersey	24	36	72	92	1	0	3	3
Passaic, New Jersey	42	56	..	161	..	..	..	..
Paterson, N. J.	113	110	331	331	6	2	14	22
Philadelphia, Pa.	1047	463	3529	2086	..	..	..	..
Plainfield, N. J.	..	..	..	..	10	6	91	48
Portland, Maine	102	36	398	148	20	23	60	56
Portland, Oregon	..	..	..	..	104	194	605	1108
Providence, R. I.	85	90	496	350	9	3	43	27
Reading, Penna.	..	..	..	..	1	18	7	49
Richmond, Virginia	169	37	335	185	87	98	273	663
Rochester, N. Y.	306	60	888	234	..	..	..	..
Salem, Massachusetts	34	12	140	60	4	1	14	7
St. Louis, Missouri	157	47	678	249	38	36	140	152
St. Paul, Minnesota	227	111	967	541	87	181	340	587
Seattle, Washington	..	..	..	..	212	251	922	1239
Springfield, Mass.	..	..	..	..	41	61	131	282
Stamford, Conn.	32	26	141	100	..	..	..	..
Trenton, New Jersey	..	..	..	..	0	0	43	0
Utica, New York	..	..	..	..	4	5	15	19
Washington, D. C.	245	94	1127	764	..	..	..	..
West Orange, N. J.	..	..	..	..	10	31	31	54
White Plains. N. Y.	25	22	87	103	5	4	15	16
Wilmington, Delaware	85	58	382	255	11	9	44	89
Worcester, Mass.	145	45	639	259	..	..	..	..
Yonkers, New York	50	63	182	214	..	..	..	..
Totals	4923	2673	18,680	10,872	2080	3003	8898	13,622
Percent Change	+84.2		+71.8		—30.7		—34.7	

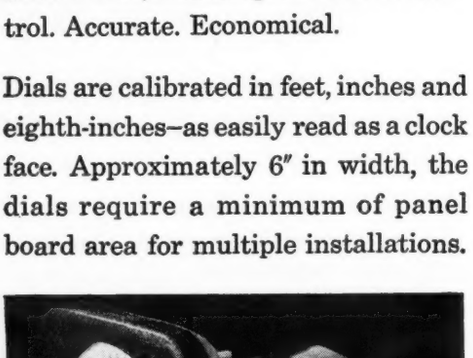
*Permits are not total sales in each market since none are reported from suburban areas, which normally account for 20% to 60% of total sales in each market; nor are they an accurate index where enforcement is lax. Rightly used, however, they are a useful working index.

...at your finger tips!

Brings your tank farm right into the control office!

The new Remote Reading Liquid Level Indicator together with its companion SMITH Liquid Level Gage makes possible a new, modern plan of stock control. Accurate. Economical.

Dials are calibrated in feet, inches and eighth-inches—as easily read as a clock face. Approximately 6" in width, the dials require a minimum of panel board area for multiple installations.



A NEW, simplified electric transmission system developed and built completely by SMITH METER COMPANY. The entire system is of explosion-proof design and operates on any standard 110 volt, 50/60 cycle light circuit. Electric power is required at receiving end only. Two reading points for each tank. Readings may be taken either at the tank, at eye level, or remotely at the master control panel. Dials may be installed at any convenient location, regardless of distance from tanks. If desired, more than one remote instrument can be provided for each tank.

Let's Talk about Our Business

The Industry's Future Depends on What We Do Now

by
W. A. Matheson*

THE TIME TO CONSERVE is when there is plenty. The time to save oil is now! And the job is one for our industry.

Oil heat, as an industry, is now 27 years old. Despite this fact, we have yet to take *full* advantage of the inherent efficiency and economy of oil as a fuel. We have used that inherent economy as a crutch instead of a spur. Let's wake up!

More than three million Americans have selected oil heat for their homes. No other automatic heat has so great a vote of public confidence. No other automatic heat has done more to deserve that public confidence. But we can do even better.

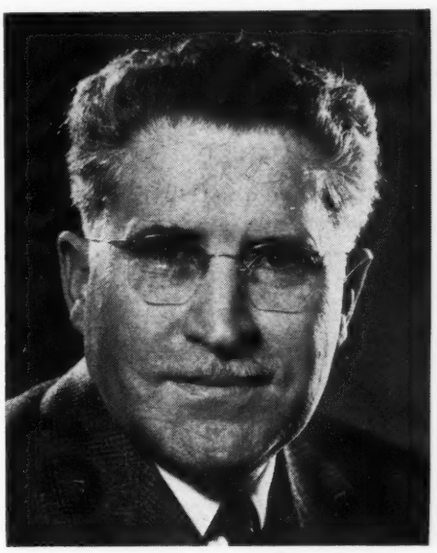
Experience indicates that every oil heat installation can result in as many as *five* additional sales. What we do *now*—and *how* we do it—will determine how close we come to that potential goal. And a possible *15 million* sales certainly deserve our united, concerted, vigorous effort not only to keep but to perpetuate the public confidence enjoyed by oil heat.

Demand for petroleum products was expected to exceed wartime peaks no sooner than 1950. Instead, the peak wartime demand was exceeded in latter 1946 and we are well ahead of wartime demand in 1947! A private survey of the larger refineries indicates that first quarter sales of distillate fuel, for the country as a whole, were about 33 *per cent* above those of a year ago.

Crude production is at an all-time high! In barrels this is 5,064,200 for the period ended June 7, compared with 4,895,650 barrels a year ago. But demand, too, is at an all-time high! Expansion of refinery capacity has been delayed by lack of materials. Add to this another problem posed by the fact that 56% of all fuel oil is delivered in but *three* months—December, January, and February.

The "spot" shortages of last winter were well nigh inevitable. They were, in a sense, growing pains. Certainly there's a challenge in these "spot" shortages. But there's an opportunity, too.

Let's make every oil *burner* an oil *saver!* Refineries cannot increase their capacity overnight. But we can start our own oil-saving program *right now*. Here's what it would mean if we made every installation an oil-saver:



A 10% cut in oil consumption on present installations would save enough fuel oil for 300,000 new installations.

A 20% cut in oil consumption on present installations would furnish enough fuel for the industry's total 1947 production.

Our competitors have "followed the leader!" They have followed our sales practices. They have followed our sales and service training practices! They have profited by our trail-blazing in installation practice! Now . . . let's step out ahead. Let's offer an *economy* service that will literally defy competition.

Mr. Dealer: See that homes are insulated and equipped with storm sash. Clean the inside of the furnace or boiler. Give extra attention to sizing combustion chambers and build them of material that comes to temperature quickly. Insulate the combustion chamber from boiler or furnace base and floor.

Test steam boiler water for freedom from grease and dirt. Clean or replace filters in winter air conditioners.

Include an automatic draft regulator in every installation. Use instruments to check draft setting, CO_2, and stack temperature. Settings checked by instrument are the only ones that assure economy.

Refuse to install oil heat in boilers or furnaces that are so old and poorly designed and inefficient you just know they would be fuel hogs. Regard replacement of oil heating equipment—aged to the point of hopeless inefficiency—as important as a new oil contract.

And—aside from these economy services—recommend summer fills with fuel storage tanks. Help ease the burden on refining and transportation facilities. Recognize the fact that oil heating is a year 'round business.

Mr. Manufacturer: Back up your dealer! Make certain that he has the information necessary to do this job. Get out special oil-saver bulletins. Hold refresher schools if necessary. Your dealers—and your industry—are counting on you.

This conservation program is *not* an emergency program. Instead, it is the positive action program of an industry ready and able to share 27 years of accumulated skill and know-how with its owners.

Above all, we who are to help oil heat realize its destiny, *must* get our thinking above basement level. We *must* realize that an oil burner is installed in a *home*,

*Manager, Williams Oil-O-Matic Div., Eureka-Williams Corp., Bloomington, Ill.

not simply attached to a furnace or boiler.

Let's think in terms of gallons-per-heating-season! Many of you can remember when gasoline cost as little as 7 or 8¢ a gallon. But what motorist, today, would trade what he gets, in modern transportation, for the dubious era of low cost—but also *low mileage*—gasoline?

Here is a recent statement by a research official of a major oil company: "Catalytic cracking and other new techniques in the petroleum industry now make possible a decided step-up in performance level of tomorrow's gasoline, so that new engine designs capable of taking full advantage of such fuels can and probably will be developed. High octane fuels operating in cars having improved design features should yield about 20% more mileage than the best current practice."

Within a week, newspapers told of a new automobile engine which, with improved fuel, may increase gasoline mileage by possibly 33-1/3 per cent and eventually save American motorists a billion dollars annually.

The improved fuel is *always* ahead of the improved product. The automotive engineer and the oil heat engineer design their equipment to burn the prevailing oil. That's when the motorist gets more miles per gallon and the oil heat user knows the economy of fewer gallons per heating season.

Today, we of the oil heat industry enjoy a great public trust. With that trust is a proportionate responsibility. *How* we use the fuel oil that goes through our equipment will go far to determine the future of our industry. There's a job to do. Let's do it *together!* Let's make every oil *burner* an oil *saver!*

Export Controls On Oil Revived As Of June 30

THE OFFICE OF INTERNATIONAL Trade of the Department of Commerce anounced June 24 that effective June 30 export licenses would again be required for the shipment to all foreign destinations except Canada of the following petroleum products: all motor fuels including gasoline and aviation gasoline; kerosene; gas oil and distillate fueloil; residual fueloil; and blending agents of petroleum origin.

◈

Harold G. Gamble has been elected vice president and member of the board of directors, Standard Heater & Oil Eqpt. Co., Jersey City, N. J. The company has been making heat exchange equipment for fifteen years and produces also the Standard water tube boiler.

Dealers Bulk Storage For Fueloil 30% Filled

FOR QUITE A NUMBER of reasons, fueloil distributors question the wisdom of filling their bulk storage at this time. Only 29% of such capacity was filled on June 1, 1947, and there was relatively little difference in the percentage between different geographic areas.

In a study by FUELOIL & OIL HEAT, made during June, two hundred well selected and representative fueloil distributors not only reported their June 1 position, but also agreed to supply their storage figures monthly until such time as the overall supply situation materially improves. Table I shows dealer storage capacity by four principal regions, for both distillate heating oil and Kero-No. 1, and indicates the percent filled for each type of storage on June 1. The Pacific Coast states were omitted from the study because the supply outlook in that area is apparently not critical for the coming season.

Asked why storage was not running at a higher level in dealer plants, principal reasons were price uncertainty, carrying costs, and inability to get product. Table II shows the relative weight of these reasons in different sections of the country. Eastern states are more concerned about price, while the Midwest was simply unable to get more product at that date.

Fueloil distributors everywhere are planning, or have started, special drives filling up customer tanks. Table III shows by areas the percent of distributors who have launched summer fill-up campaigns. Then it shows the extent to which more effort is being exerted this summer than last summer, as measured by percent of dealers reporting enlarged effort. The third column of the table shows the percent of customers that normally gets summer fill-ups, and the attempt this year will be to get a much higher percent filled.

TABLE I

Dealer Distillate Storage, June 1, 1947

	Dealer Storage Capacity (Thous. of bbls.)		*Percent Filled 6/1/47*	
	No. 2-3	*Kero-No. 1*	*No. 2-3*	*Kero-No. 1*
NEW ENGLAND	2,171	931	31	34
MID-ATLANTIC	10,360	1,686	30	55
SOUTH ATLANTIC	2,718	1,193	30	68
MIDWEST	3,939	2,422	26	21
FOUR AREAS			29	43

TABLE II

Reasons for Not Filling Dealer Fueloil Storage

	Price Uncertainty	*Carrying Costs*	*Cannot Get It*	*Other Reasons*
NEW ENGLAND	38%	25%	6%	31%
MID-ATLANTIC	30	11	15	44
SOUTH ATLANTIC	24	..	27	49
MIDWEST	3	14	76	7

Typical Other Reasons:
Cleaning or repairing tanks.
Lack of capacity to take another tank car or barge.
Normally fill later in summer.
Temperature loss too great.
Carrying customary summer inventory.
Can get all needed within 24 hours.

TABLE III

Dealers Efforts to Fill Customer Tanks

	Have a Campaign	*More Effort Than in '46*	*Percent of Customers Normally Getting Summer Fill-up*
NEW ENGLAND	90%	57%	48%
MID-ATLANTIC	81	71	68
SOUTH ATLANTIC	95	70	31
MIDWEST	87	80	65

Tank Shortages Largely Midwestern

Field Survey for O.H.I. Committee Finds Need for Around 20,000

AT THE DIRECTORS' MEETING of the Oil-Heat Institute of America, held at Portsmouth, New Hampshire, July 8, A. E. Hess, managing director, presented a report on the tank shortage from the newly formed Steel Supply Committee, headed by P. K. Addams, president of Fitzgibbons Boiler Co.

Facts contained in the report were based upon a country-wide field survey recently made for the committee. Some of the more significant paragraphs follow:

The overall conclusion is that the real shortage amounts to about 20,000 fueloil tanks. The principal shortage areas and the ones that we should seriously consider first are the Midwest, which appears to need about 13,000 more tanks than are available, and the Pacific Coast, where an additional 4,000 tanks would relieve the stringency.

As in most other so-called shortages being encountered in many lines of businesses, the real difficulty lies in distribution of the tanks between sections of the country and between companies within the industry. The indicated total oilburners that are now in dealer stocks, and are sold but not yet installed, is 45,618. Fueloil tanks of all sizes in stock are 75,701. In spite of the fact that total stocks are much above total immediate needs, we still find that dealers are short 23,724 tanks to make installations of the jobs sold but not installed, and where the burner is on hand.

Addams

The indication, then, is that total stocks would have to be approximately 100,000 to be able to take care of the 45,618 burners sold but not installed. The difference represents the necessary cushion to compensate for geographic and inter-company maldistribution. This ratio of approximately two-to-one can be applied to the various sections of the country to find out where are the serious shortages and about what is necessary to relieve them. In considering tanks in stock as percent of burners sold but not installed, we find that for New England this figure is 222%, for Mid-Atlantic states 201%, and for South Atlantic states 214%, each of the three being better than the two-to-one ratio. But in the Midwest we have only 81% and on the Pacific Coast 77%, showing acute shortages here. To bring those areas up to about the two-to-one ratio will require about the number of additional tanks first mentioned, or 13,000 Midwest and 4,000 Pacific Coast.

Within the broad general sections of the country there are local spots or individual states less favorably situated than others, but, where the overall section is in fairly comfortable shape, we can assume that those situations will correct themselves within a reasonable time. For example, of the five New England states studied, Maine and Vermont are less favorably situated than the others, but because distances are not great throughout the whole region, there should not be too much trouble in getting the tanks moved about. In the Mid Atlantic area, upstate New York and the Baltimore-Washington region are a little less favorably situated than the other sub-divisions, but again, these should have attention only after the more critical areas have been studied.

In the Midwest, the most difficult spots from the standpoint of tank shortage seem to be Chicago, Wisconsin, Minnesota and Iowa.

In measuring the tank shortage problem, we have paid less attention to what dealers believe will be their shortage later in the year, than to their immediate shortages. In their future outlook, they are being understandably optimistic, because they expect to install 628,308 burners in 1947. This does not include burner replacements where new tanks are not needed, and this whole study excludes 14 Mountain and Southwestern states, where there are not many oilburners. Considering these exclusions, it would appear that the dealer estimates of future tank requirements for new jobs are substantially above the actual anticipated need, based on other industry forecasts. In view of this, the anticipated future shortage will probably wash out, but we do need to bring to the industry some help on the present and actually known deficiency.

The question was asked as to whether, in the overall, the dealers expected tank supplies to give them much trouble, some trouble, or little or no trouble. Nationally, 20% of dealers expect much trouble, 48% expect some trouble, and 32% expect little or no trouble.

The price of tanks apparently had little to do with their supply. The Pacific Coast's $42 average price did not assure an adequate supply, while New England's $27 average did.

O.H.I. is distributing copies of the report to tank manufacturers, particularly Midwestern and Western ones, in the belief that, knowing the situation steps will be taken to relieve it. The Committee has already had some promises to that effect.

◈

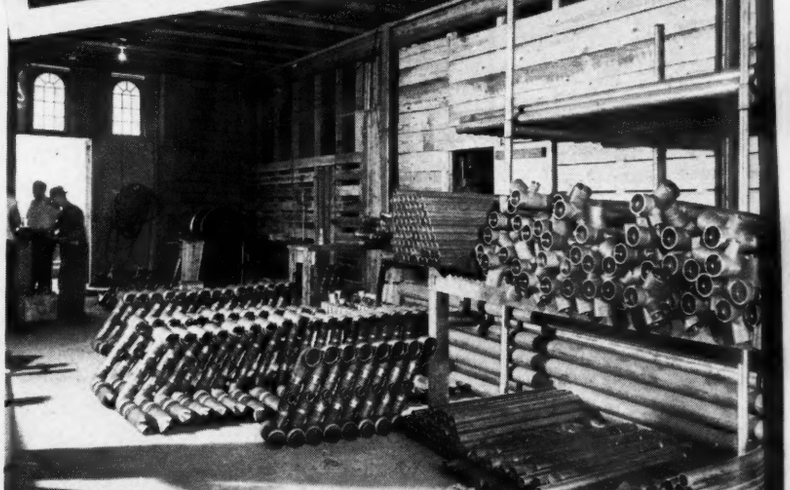
Minn.-Hon. Chicago Office Moved to Larger Quarters

THE CHICAGO regional office of Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., has moved to a new location and now occupies the entire top floor at 351 East Ohio St., providing three times as much space as former quarters.

Fred Kaiser is manager of the office which supervises activity and branch offices through the Middle West.

◈

Donald H. F. Macpherson, well known in western oil circles, died June 8 at Riverside, Calif. Born in Inverness, Scotland, he came to the United States in 1911. He was a former director of Gilmore Oil Co. and more recently acted as Riverside distributor for General Petroleum Corp. Surviving are his wife, two daughters, two grandchildren, an aunt and a cousin.



Oilheated Homes, Wholesale

Long Island Builder Uses Radiant System in Low-Cost Houses

by
A. E. Coburn

ONE recipe for good hassenpfeffer starts, "First, catch a rabbit. . . ." The formula for building low-cost oilheated homes in wholesale quantities starts, "First, take ten million dollars. . . ." This apparently was the formula used by Levitt & Sons when they started some years ago to build thousands of homes on Long Island, N. Y. The formula probably is good for a start, but the original ten million dollars today would hardly make a down-payment on one corner of the firm's operations.

After building literally thousands of homes of all sizes, shapes and materials over the years, Levitt has developed a know-how that probably can be duplicated only by a similar investment in experience. All this experience has not been happy. Old hands will remember the 1938 uprising of gasheated homeowners at Levitt's South Strathmore development, and the more recent battle with the Long Island Lighting Company to force the utility to connect 1,858 new homes that have been refused gas for heating due to insufficient gasplant capacity. Most of the company's homes have been oil or gas heated.

Experience has not made the Levitt company cautious in its building operations. It is a progressive, hard-hitting outfit that dares to step off the beaten path whenever modern practice dictates. The company recently fought through a change in the town ordinance in Hempstead, L. I., which prohibited basementless houses within the town limits. As a result of this change, permission has been granted to build 2,000 radiant-heated homes on concrete slabs. All these homes will be oilheated with a hot water system embedded in the floor and domestic hot water supplied from a novel hook-up at the boiler.

The houses consist of a livingroom, kitchen, two bedrooms and bath. A stairway to the attic gives access to space for two additional bedrooms and bath if the owner wishes to finish it himself.

In addition to building 900 of these homes for sale, the company is constructing a 2,000-house rental community, the largest ever built in the United States. Rents will be $60 per month and will be rented to veterans only with an option to purchase. More than 10,000 applications have been received for the 2,000 houses. The firm is trying currently to buy additional ground to double the size of the project.

Though exterior appearance varies, the houses in a development are identical in design and equipment. Locations on the lots (60 x 100 ft.) are varied to avoid any appearance of "row" houses, as well as the variations in external appearance of the individual units. Equipment includes Bendix automatic washers, G. E. refrigerators, Youngstown kitchen equipment, and Briggs sanitary ware. Piping is all copper.

Live Heat, Inc., Hempstead, Long Island, is supplying 1,200 Timken OBD-50 copper tube type boilers to one development, and 278 OCA-10 wall flame burners to fire Capitol 104 boilers to another. Units are delivered to the jobs with the hearth installed and the burner set. With each unit goes a B & G circulator and #500 relief valve, two aquastats, a thermostat, a Cole-Sullivan draft regulator and a Ventalarm for the buried 275-gal. tank. Installation is done by independent contractors working for the Levitt organization. The buried tank is piped by the plumbing contractor, the wiring is done by the electrical contractor. Live Heat guarantees a year's service on the oilburning unit from the time of occupancy, and Live Heat Oil Company supplies oil on a three-year contract.

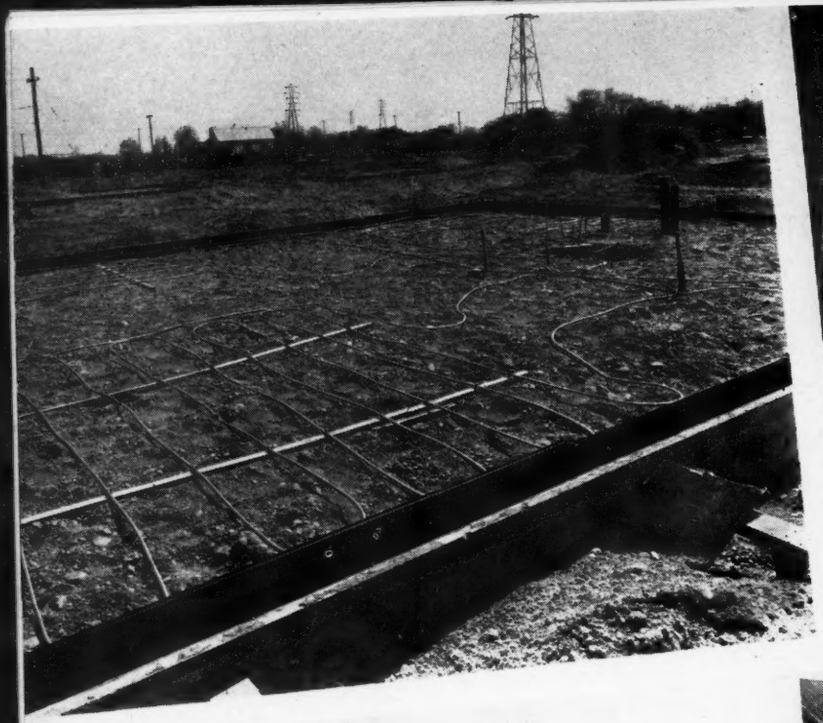
Heat loss of these houses is calculated at 28,000 Btu per hour. The unit, installed in a compartment off the kitchen in space under the living room upstairs, is capable of delivering 50,000 Btu maximum at the boiler outlet, at a firing rate of slightly more than a half gallon per hour. Actual firing rate probably will be considerably less than the 3.9 lb. per hour maximum.

Hot water leaving the copper tube boiler passes through an expansion tank located over the boiler and out to a header from which four valved lines go to the sinuous copper coils under the floor of each room. The kitchen is heated partly from the boiler compartment. When the unit operates for summer hot water, an exhaust fan will take heat out of the boiler compartment before it enters the kitchen. The system can be balanced to give exactly the amount of heat desired to the living room, two bedrooms and the bathroom by adjusting the water flow through the valves at the header. Water returns through the circulator to the boiler.

Domestic hot water is supplied by an instantaneous coil installed in the expansion tank. The system was devised by Irwin Jalonack, chief mechanical engineer for the Levitt organization, who designed the heating systems for the houses. Coils are sufficient to deliver three gallons of hot water a minute at the tap, and with about 18 gallons of hot water in the expansion tank, the burner will not run for hot water on ordinary short draws. If the water should be cooled in the expansion tank by unusually long draws of hot water, the stored heat in the concrete floors will maintain room temperature for longer than ever will be necessary.

After a suitable base for the concrete slab has been prepared, long stakes are driven into the ground to support a series

Low-cost homes *get their start as shown on the opposite page. Pre-cut lumber (upper left) is loaded mechanically on waiting trucks to be assembled on the job (left center) to complete the shell of the house at the lower left. Plumbing and water systems are prefabricated as shown at the upper right and stored (right center) to be readily available for quick and easy installation (lower right) before the floor is poured.*



of planks, on which the copper coils are placed. These half-inch continuous coils are then stapled to the planks, and the concrete floor slab is poured after a 300-pound hydrostatic test shows the coils to be tight. The floor is finished with asphalt block flooring after the house interior is completed and decorated.

Mr. Jalonack reports on a test during which a house was heated to 90°, and the floor area reached 100° at the surface. There was no indication of any softening of the asphalt floor covering at that temperature. In ordinary heating practice it is believed the floor temperature need never be higher than 80° to 85° in the coldest weather.

Radiant heating with forced hot water in an all copper system is no more expensive than forced warm air, Levitt officials say. The firm has built warm air heated homes using a conventional type of forced air system, and a combination of radiant and direct air to the rooms. In this latter system air ducts are carried around the room under the floor with register opening under the windows. Though the warm air systems are entirely satisfactory as far as comfort heating is concerned, officials point out that a separate water heater is required, and the additional cost brings the total to about the same as the forced hot water radiant system, which also supplies domestic hot water.

The key to success in building low-cost homes seems to be in precutting and as complete prefabrication as possible before the materials reach the job. Yards of the North Shore Supply Company, which buys for and supplies the Levitt developments, are beehives of activity. From these yards roll a fleet of pre-mix concrete trucks carrying material for floor slabs, streets and sidewalks. Trailer trucks piled with precut lumber deliver half a house per trip, and others haul assemblies of ungainly, angular tubing which become complete water supply and plumbing systems on the job. Shops in the yard do repairs to bulldozers, trucks and graders, and next to these shops men bend copper tubing around forms to prefabricate radiant heating grids that can be pulled open in place to supply exactly the right amount of radiation for the room.

Copper tubing of the proper length is bent and stored in individual bins marked "Living room," "Bedroom No. 1," "Bedroom No. 2" and "Bath." A coil from each of these bins supplies the entire radiation needs of a house. Each coil, bent on the proper radius and of the right length, is opened accordion-like to fit the floor space. Joints are silver-soldered inside a ferrule of tubing of the next larger size.

Storehouses in the North Shore yards are a setting for an equipment dealer's dream. Automatic washers, refrigerators, boiler, kitchen equipment and miscellaneous other supplies are piled to the roof in orderly tiers of crates. Officials say they like to keep "about 500 houses" ahead in stock, but frantic building activity and material shortages make this goal a hard one to sustain.

Most of this equipment is bought through local distributors who can provide service and parts to future owners. Distributors interviewed were enthusiastic about their dealing with the Levitt organization. Harold Parsons of Live Heat, Inc., which is supplying oilheating equipment is typical:

"It is a clean deal," says Mr. Parsons. "Levitt pays a distributor a fair price for a recognized and reliable product, and nobody has made any unreasonable demands. We included a year's service in our price, after which we shall try to sell service contracts to the owners. We have had the finest of cooperation from every member of the Levitt organization. All bills are paid promptly and without quibbling."

Contractors and men on the job are

Oilfired unit *is set in a compartment off the kitchen which is under the stairs. The expansion tank, which also contains the instantaneous water heating coils, is immediately above the boiler. Circulator is located between the boiler and the chimney. The four valves by which the heating system is balanced and regulated can be seen against the base of the chimney. Kitchen fixtures go in space at the right, backed up to the bathroom.*

Heating system installation *is shown in pictures at the left of the opposite page Copper tube grids (upper left) are supported on plank strips with supply and return connections silver soldered to the grids. The whole assembly is tested at 300 pounds before the concrete floor is poured (center) and finished (lower left). Precut stairs are set in place (upper right) in the living room. Notice hot water supply and return lines in the floor under the stairs. Prefabricated bookshelves are fitted under the stairs in the living room (right center), beyond which is the kitchen. Timken oilfired boiler units are checked out of cars in the rear at the lower right.*

friendly and apparently fully satisfied with the treatment they are accorded. Men are paid on a piece basis, and they are encouraged to produce as fast as is consistent with good work. The norm for a particular job may be a house a day, but if a crew can turn out a satisfactory job on two houses a day they are paid double for their efforts.

It has been estimated that only 16,000 radiant heating systems have been installed in this country since 1909, and comparatively few of these have been residential jobs. This one block of oilheated homes undoubtedly will constitute the largest radiant heated community in the country.

The town ordinance against basementless houses was aimed at prohibiting low-cost homes that might prove unsatisfactory due to cold floors. Putting the heating system in the concrete floor has overcome this objection and the ban has been lifted for this development. The homes are being occupied as fast as they can be completed.

There are other new homeowners in the vicinity who are less fortunate. Applications for gas service to 1,858 new homes for heating have been refused by the Long Island Lighting Company, and utility officials say that 8,000 applications for cooking gas also cannot be supplied. About twenty builders in the area have used gas heating equipment in their developments, and most of these builders now are asking the Public Service Commission to force the three utility companies serving Long Island to connect the homes. Gas officials say they have capacity for only 58,000,000 cubic feet of gas a day, and the additional load would increase the demand to 60,000,000 or more. (See page 86 for later developments.)

Live Heat Oil Company has been assured of oil supply for the 1,200 new oil-heated homes. It is planned to institute automatic delivery service to the community. Through the use of automatic fill signals drivers will fill as often as necessary, or whenever convenient, and all accounts will be billed at the end of the month. It is believed that heating costs will be comparatively low in relation to nearby gasheated communities. Some of the owners of gasheated homes found their gas bills burdensome during the last winter—their first in their new homes.

The chief lesson from this Levitt operation is that local dealers and distributors can do business with progressive builders. Margins to supply materials for a large number of homes will not be as great as for a like number of complete conversion installations in existing homes, but they do not need to be. Few dealers would have the skilled manpower or the capital to do 1,200 complete installations on a production line basis. They still can supply good materials and supervise installations for cooperating builders, and retain the service and oil contracts.

Trans-Continental Asks To Build Gas Line East

FEDERAL POWER COMMISSION has before it an application from the Trans-Continental Gas Pipe Line Company to build a 26-inch pipe line from Texas to the northern Atlantic Seaboard. It is estimated the project would cost $130,000,000 for 1,380 miles of large diameter pipe to serve New York, New Jersey, Pennsylvania, Delaware and Maryland. The line would pick up natural gas in the vicinity of Hemphill, Texas, for delivery to the East.

Meanwhile, new allocations of natural gas carried by the Big Inch and Little Inch lines to the Appalachian region have been made by the Federal Power Commission, effective June 17, to November 1, 1947. Allocations are based on the transportation of 140,000,000 cubic feet of gas a day.

Columbia Gas System is to get 52,800,000 feet; Consolidated Natural Gas System 44,000,000 feet; Panhandle Eastern Pipe Line Company 20,000,000 feet; Equitable Gas Company 11,000,000 feet; United Natural Gas 10,000,000 feet and Carnegie Natural Gas Company 2,200,000 cubic feet.

British Conversion To Oil Speeded In Industry

BUCKINGHAM PALACE, traditional London home of the English King and Queen is being converted to oil heat, as are a number of other larger British buildings, but other than plans for some central district heating installations, plans for conversion to oil in England center around industrial uses. Approved conversions by the middle of March called for 1,000,000 tons of fueloil, or slightly less than 7,000,000 barrels. It is expected that demand for fueloil will be up to 5,000,000 tons, or little less than 34,000,000 barrels by the middle of 1948.

Conversions can be made only with the approval of the Fuel Oil Department of the national Petroleum Board, and with a short supply of steel, labor and equipment conversion applications are examined carefully. It is expected that the steel industry will demand a million tons a year by the end of 1947, to make it the largest single user of fueloil. A railroad program has been approved to oilfire 200 locomotives and further development is being planned in the diesel electric field.

A huge new central heating plant is planned for the heart of London, and has been approved for oilfiring, with an estimated demand of little less than 1,500,000 barrels a year of heavy oil. Other London district heating plants are planned. The fishing industry will use 100 new long distance trawlers by the end of next year, all oilfired. This demand is expected to reach close to 1,500,000 barrels a year.

Canadian Oil Demand Is Up Sharply in Quarter

OIL CONSUMPTION in the first quarter of this year was up nearly 30% in Canada over the same period of 1946, according to a release by the U. S. Office of International Trade. Total petroleum consumption at the end of March this year had reached 16,306,962 barrels against 12,781,757 barrels in the year before.

Kerosene and stove oil demand for the quarter was up to 1,804,209 barrels from 899,405 barrels in 1946; light fueloils up from 2,393,330 barrels to 4,392,439 barrels, and heavy fueloil consumption increased for the quarter from 3,765,185 to 4,320,047 barrels.

J. D. Burnes, treasurer, Petroleum Heat and Power Co., Stamford, Conn., was elected a vice president at a meeting of the Board of Directors on May 28. Mr. Burnes has been with Petro since 1928 and after several years in branch and home office accounting became assistant treasurer. He succeeded to the position of treasurer in 1945. Also announced was the appointment of *T. J. Cody* as comptroller and *George H. Smith,* assistant comptroller.

Conservative Optimism On Supply

Holman of Jersey Sees Enough Oil, Providing No Bad Breaks

IN THE FACE OF AN INCREASING number of pessimistic statements on next season's oil supply, Eugene Holman, President of Standard Oil Co. (N. J.), speaking before the Marketing Division of A.P.I. at Minneapolis, June 30, expressed a definitely optimistic view of the problem.

He pointed out that Jersey expects that the oil industry will come through the next twelve to eighteen months meeting all of the public's demands made upon it, providing only that we do not get any serious bad breaks, such as a prolonged coal strike or exceptionally severe weather next winter. Holman made clear that his company was giving credit to the soundness of the supply and demand estimates made by the Economic Advisory Committee of the Interstate Oil Compact Commission and also those of the Bureau of Mines.

Each of those groups anticipated an increase in demand for distillate heating fuels of around 20% over the past season. They then showed supply and demand in balance within a fraction of one percent. This means that if distillate central heating oilburners installed in 1947 do not exceed a half million, there will be enough oil to take care of everyone, unless we get some of the setbacks previously mentioned.

Industry Must Meet Huge Demands

A number of the more important paragraphs of Holman's talk follow:

Today I think we can all agree that the industry's major problem is that of meeting greatly increased needs of consumers everywhere for oil products. For the first time in the peacetime history of our industry we are finding it difficult to increase the supply of products rapidly enough to meet mounting consumer needs. Tightness of products supply has developed at many places, particularly here in the Middle West.

Today we have frequent references to a "shortage" of petroleum products. I think the word "shortage" may be creating a mistaken impression on many people. There is no basic shortage of petroleum. The shortages we are talking about result from the industry's difficulty in closing a small but significant gap between a record supply of petroleum products and a record demand for them. That gap, in my opinion, will be closed. The oil industry has the ability and the foresight to do this job. The only thing I can see which would raise any question about this are factors completely beyond our control, such as unforeseen interruptions in flow of construction materials or events in the national picture which cannot now be foreseen.

Shortage Is Not in Crude Supply

Let's look at the several pieces which make up the pattern of our present situation.

First of these, of course, is that of our basic supply of crude oil. I want to make it clear and I think all of you should do so repeatedly, that there is no shortage in our basic crude oil supply. There is ample oil, in the form of proved reserves underground, to meet today's needs. Getting enough of this oil out of the ground in time will be a big job. But the vast majority of oil men are convinced that it will be done. Of course this refers to the immediate picture. I am not talking about the ultimate long-range supply, which is another matter. But I am also convinced that there is no need for concern regarding our long-range supply of raw material for oil products. There is still a great deal of crude oil to be found in this country. But, over the long term, we will have to depend increasingly upon other sources to supplement our domestic supply.

Two basic additional sources are available for this purpose when and if needed. The first of these is imports from foreign countries. Petroleum reserves and discoveries in foreign countries are increasing at a high rate. The second additional source is the manufacture of liquid oil products from sources other than natural petroleum. These include coal, natural gas and oil shale. In the short-term future substantial quantities of petroleum products will be made from natural gas. And experimentation is well along on the liquefaction of coal, which, as a matter of fact, awaits only economic development for its application on a major scale. The manufacture of oil products from coal and other sources gives us assurance that over the long-term future there will be no lack of liquid fuels. Obviously, however, such a revolution in our industry will not come overnight.

With respect to imports, the entire industry seems agreed on a policy of using imports to supplement but not displace domestic sources of crude. Imports should be used to strengthen, not weaken, an industry so vital to this country's welfare as petroleum.

Another important piece in the pattern we are considering is that of demand, or consumer needs.

There are two widely accepted estimates of United States requirements for oil products in 1947. They are the forecasts made by the Economic Advisory Committee of the Interstate Oil Compact Commission and by the Bureau of Mines. The estimates are pretty close and tend to confirm each other. The Bureau's figures, which are slightly higher, estimate a total demand for crude and products at 5,733,000 barrels daily, including exports. That is a large figure. For the year, the industry will be asked to deliver nearly two and one-tenth billion barrels of crude and products. It is difficult to keep our perspective when we talk of figures like that. The United States alone is now using more oil than the entire world before the war.

First Quarter Demand Up 13.4%

As you all know, the industry had an unprecedented first quarter this year. According to the Bureau of Mines, domestic demand was up 13.4 per cent over the first quarter of last year. This experience might indicate that the year's estimated total of 5,733,000 barrels daily is too con-

servative, since it is only 7.7 per cent above 1946.

However, preliminary second quarter figures indicate considerably smaller increases over last year's figures. Part of the increase in both first and second quarters could have resulted from abnormal movement of stocks from refinery tanks and bulk terminals to secondary storage. Such a movement would show up in the Bureau's figures as demand against the industry even though the products were not consumed.

Two Periods of Retail Activity

I think it may help in viewing the problem if we break down the figures to correspond with the two principal seasons in the industry's retail business—gasoline in the summer and heating oil in the winter—and compare the two periods. The Bureau estimates that this year, from April first to October first, the demand for oil will be 5,577,000 barrels daily, well below the estimated yearly average. But for the six-month period between October first this year and April first, 1948, a reasonable estimate, based on the Bureau's figures for the last quarter this year, indicates an average demand of 5,977,000 barrels daily—400,000 barrels a day more than the expected summer period demand.

Eugene Holman, *president, Standard Oil Co. (N. J.). In his Minneapolis talk, much of which is here reproduced, Holman concluded with "Overall requirements for the immediate future will be met, provided of course that we do not have to face exceptional contingencies such as an abnormally hard winter, shortage of competitive fuels, or unpredictable developments in the national scene."*

There is the problem in a nutshell. The industry must go all out now to produce products. It must store them against the record-breaking requirements ahead of us next winter.

I cannot emphasize too strongly that this is the key to success in meeting the situation ahead of us. Refinery runs should average about 5,200,000 barrels a day during July, August and September if we are to be sure of having as much heating oil and other product stocks on October first as we had last year.

If the industry succeeds in getting ready now for the heating season, it might even be possible to slack off just a little in crude and refinery runs during the October-April period—and still reach April first next year in good shape with an adequate storage of gasoline. However, we are working with estimates. Little, if any, spare capacity is available. As a precautionary measure, the industry should operate at maximum rates until we are sure that the public and government needs of the future can be met comfortably.

Peak War Demands Exceeded

These then are the requirements of our industry over the short-term future. They are far and away the greatest in the industry's history. They exceed even the peak war demands and are steadily increasing. These demands reflect the manner in which people everywhere are turning more and more to the use of oil products. In addition to meeting the normal expansion in the use of oil, the industry is today carrying a particularly heavy burden since other major sources of energy have not borne their share of the generally increased demand for fuel.

Now let us look at another part of our pattern—the matter of physical equipment to meet the heavy demands which are being placed upon us. For the first time in our peacetime history, we find our facilities, from producing field to delivery tank truck, strained to the utmost. The reasons for this have been stated many times but it is still in order to recite them again. From 1941 to 1945 the complete effort of the industry was directed at providing equipment and facilities to supply products especially needed for the war effort. While the construction programs during the war period were immense, they did not result in any substantial increase in the capacity of the industry to supply its normal products. Because of the pressure of war needs, even normal replacement of equipment in producing, transportation, refining, and storage of products was postponed.

Since the war the industry has had not only to catch up with its normal program of replacement and modernization, but has also had to expand its capacity in order to meet record new demands. Right now the industry is in the midst of the greatest construction and expansion program in all its history. Just a few days ago the announcement was made that over the next two years the industry planned to spend nearly four billion dollars in this country alone. It is hard to grasp the magnitude of a program which in the space of a few years will involve expenditures amounting to over 20 per cent of the total investment of the industry to date. It is an immense job, and its completion, even under normal circumstances, would be a tremendous achievement. Yet we are hampered by the many limitations which all the world faces during this postwar reconstruction period. The industry is moving fast, however, in spite of such problems as shortages of materials. I know of no one who is not optimistic about its ability to overcome these obstacles and to regain very soon its traditional ability of keeping ahead of demand with its plans and programs.

Still another piece of the industry's present picture which must be examined if the present situation is to be understood, is the immediate problem of dealing with these demands while our construction and expansion programs are in progress. It will be some time before new facilities are available. What are we doing meanwhile to meet present demands?

Crude Production At All-Time High

The record of recent months speaks for itself. Crude oil production for the four weeks ended June 21 reached an all-time record of 5,090,000 barrels per day. In refinery crude runs to stills, for the same period, the all-time record figure of 5,098,000 barrels per day was established, surpassing without even so much as a side glance the wartime peak of 5,001,000 barrels per day reached in July 1945.

As an industry, we can be proud. What other major industry has done as well as that? When you get outside the oil busi-

ness you have to look mighty hard to find industries that are now breaking their wartime records.

To us in the industry those figures represent a lot more than just oil. They represent the devotion of every member of our industry to his job, and a widespread sense of responsibility to meet the requirements that face us.

Activity Must Remain At High Level

Crude production and refining rates are now at levels where we can begin to see light. But the industry's activity must remain at these high levels until we can be sure that the nation is adequately served, even though some of the operations involved are unusual and costly.

Large quantities of West Texas crude, for example, are being moved by tank car at high cost, some into the Middle West and some to the Gulf Coast. This is providing marginal increments of crude which are very important in the industry's present picture. Crude would not be provided in this manner under any normal conditions. Pipeline capacity is under construction now to make this West Texas crude available under more economical conditions.

New pipeline capacity to the Mid-West—about 60,000 barrels a day, I understand—is under construction and will be in operation by the end of this year, and perhaps another 250,000 barrels a day will be in operation by some time next year. These lines should greatly ease the situation in one of the most critical supply areas at the present time.

Expanding refinery operations, even under unusual conditions, are also the order of the day.

Estimates of the industry's refining capacity are subject to many interpretations, but from practical experience it would appear that there is in this country about 4,900,000 barrels a day of efficient capacity. If that is correct, the refinery runs needed will require the expensive operation of from 200,000 to 300,000 barrels of inefficient plant capacity until new refineries now building come on stream.

The foregoing facts and figures certainly entitle us to be hopeful and optimistic about meeting the current total overall demand for petroleum products.

However, it is one thing to balance the the overall statistics so that the "average" customer is satisfied. It is another—as we all found out during the war—actually to deliver our products to our millions of customers at thousands of places at just the moment they want them. Two hundred gallons of heating oil at St. Louis, earmarked for Minneapolis, doesn't help the Minneapolis home owner who needs oil within an hour. "On the average" is a fine phrase, but we have got to do better than that. Every individual customer has got to have oil when and where he needs it, if it is humanly possible for us to get it to him.

As we all know, it is here in the Mid-west that the job will be much more difficult than anywhere else in the country. Just prior to the war, the Mid-west produced more than 1,100,000 barrels daily of crude. Its refineries in 1941 ran slightly under 1,100,000 barrels daily, so that refinery capacity and crude production were essentially in balance within the area.

Today refinery capacity in the Mid-west has been exapanded. Crude runs are averaging about 1,300,000 barrels a day. But crude production has actually declined since 1941 and, from the figures I have seen, it appears that a gap of about 470,000 barrels a day has developed. To fill this gap, large additional amounts of crude must be moved into the Mid-west from other areas.

Consumption More Than Yield

Present pipeline facilities are carrying, I believe, about 400,000 barrels per day of that total. The rest must be moved by such means as barges and tank cars, which places an additional load on the already short supply of these facilities. In addition, consumption of products in this area is now considerably greater than refinery capacity, and the large quantities of products which must be brought into the area, principally from the Gulf, multiply the transportation problem. The complete answer to this problem has not yet been found, but great effort is being expended on it.

All this is reflected in the current level of crude and product stocks in the Mid-west, which are appreciably lower than they were a year ago—the only part of the country where this is true. It is clear that you here in the Mid-west have a job to test your mettle.

Let me now sum up briefly the overall situation as I see it.

First, overall requirements for the immediate future will be met, provided of course that we do not have to face exceptional contingencies such as an abnormally hard winter, shortage of competitive fuels, or unpredictable developments in the national scene.

Second, transportation and distribution difficulties, particularly in the Mid-west, may cause temporary short supplies in individual localities or for an individual supplier. There probably will be costly emergency expedients and last-minute deliveries.

Third, the current tight supply situation is a temporary, not a permanent one. The expansion and construction programs now planned or in progress will restore the industry's traditional margin of supply over demand. Our supply of basic raw materials is not in question.

". . . to make do with what we have"

Thus far I have attempted simply to summarize the facts as I see them concerning a tight situation facing all of us in the oil industry today. We are hard put to give our customers all the oil and gasoline they want—simply because they want more than they have ever wanted before.

Every bit of equipment we have for getting oil from wells to delivery trucks is being worked overtime. If we had not had a great war job to do, we would have concentrated on building new equipment to meet this demand. As it is, we are for the moment having to make do with what we have.

Now if this is a reasonably accurate summary of the situation—and I hope that you may agree that it is—then I would like to leave *facts* and express some *opinions*.

My first observation is that the whole oil industry is tackling this job in a way that makes me proud to be an oil man. Everybody—drillers, refiners, tank car men, truck drivers and service station attendants, and all of the hundreds of thousands of other men and women who make up the petroleum industry recognize that circumstances over which we had no control have put us on a tough spot in supplying our customers. And to a man, every one of them is doing his level best to get off that spot as fast as possible.

My second observation is that we are so intent on doing the job itself that we

(*Continued on page 110*)

Oilheating Growth By States

by
Robert Gray

SINCE A TIGHT FUELOIL supply for next season became apparent, there have been numerous requests for measurements of the growth of oilheating by geographic areas in order that available fuleoil supplies may be best distributed.

This study brings up to date figures on the existing situation, and estimates the new users of 1947, so that suppliers may better evaluate their distribution for the coming season.

As a base point for starting the calculations, fueloil rations were used. These were recently published by the Oil and Gas Division, Interior Department, showing the final ration count, as of June 1, 1945. When properly understood and adjusted, the ration data are the most accurate that the industry has had.

To arrive at the figures in the first column of the table, three adjustments were made to the ration totals . . . the few exclusive water heating accounts were deleted, pipeless furnace oilheating was added, and apartment-commercial distillate oilburners were added, fitting conditions of the various areas.

Thus, the table covers all distillate central heating oilburners, and not simply the so-called domestic oilburners. The material in the other seven columns is based upon a broad industry sampling in which several hundered dealers generously supplied confidential information about their own operations and on their markets.

Some states are divided into what were OPA ration districts. The eight mountain states were treated as a unit because burners are few and individual state coverage impractical.

The 1947 estimates are projected from five months' actual installations.

Distillate Oilburners Operating, With 1947 Estimates

Relative Growth Rates by Areas

EXISTING SITUATION						1947 ESTIMATES		
Burners in Use June 1, 1945	*New Users of Burners 6/1/45 to 12/31/46*	*Burners in Use 12/31/46*	*Rate of Gain Over 6/1/45*	*Percent of U.S. Total in Use*	*State*	*New Users 1947*	*Expected Total in Use 12/31/47*	*Gain Rate Over 12/31/46*
26,930	8,727	35,657	32.4%	1.25	MAINE	8,872	44,529	21.8%
22,945	5,988	28,993	26.1	1.03	NEW HAMPSHIRE	6,087	35,020	21.0
9,505	768	10,273	8.1	.36	VERMONT	781	11,054	7.6
261,102	28,613	289,715	11.0	10.26	MASSACHUSETTS	29,085	318,800	10.0
37,820	4,050	41,870	10.7	1.47	RHODE ISLAND	4,117	45,987	9.8
101,988	28,851	130,839	28.3	4.63	CONNECTICUT	29,327	160,166	22.4
460,290	76,997	537,287	17.7	19.00	**Total New England**	78,269	615,556	14.6
419,242	106,872	526,114	25.5	18.63	NEW YORK STATE	82,785	608,889	15.7
40,527	17,194	57,721	..	2.03	Albany Dist.	19,601	77,322	..
33,746	14,314	48,060	..	1.71	Buffalo Dist.	16,318	64,378	..
7,909	3,354	11,263	..	.41	Binghamton Dist.	3,823	15,086	..
16,753	7,115	23,868	..	.85	Syracuse Dist.	8,111	31,979	..
320,307	64,895	385,202	20.3	13.63	N. Y. City Dist.	34,932	420,134	9.1
216,683	42,322	259,005	19.5	9.17	NEW JERSEY STATE	33,965	292,970	13.1
133,200	26,015	159,215	..	5.64	Newark Dist.	20,878	180,093	..
40,283	7,867	48,150	..	1.71	Trenton Dist.	6,314	54,464	..
43,200	8,440	51,640	..	1.82	Camden Dist.	6,773	58,413	..
174,282	38,143	212,425	21.9	7.52	PENNSYLVANIA STATE	44,621	257,046	21.0
386	67	453	..	.02	Altoona Dist.	79	532	..
13,043	2,277	15,320	..	.54	Harrisburg Dist.	2,666	17,986	..
154,547	34,695	189,242	22.4	6.70	Philadelphia Dist.	40,597	229,839	21.5
2,862	499	3,361	..	.12	Pittsburgh Dist.	585	3,946	..
1,313	229	1,542	..	.05	Scranton Dist.	268	1,810	..
2,131	376	2,507	..	.09	Williamsport Dist.	426	2,933	..
14,858	3,036	17,894	20.4	.62	DELAWARE	3,336	21,230	18.6
114,943	20,143	135,086	17.5	4.77	MARYLAND	19,908	154,994	14.7
37,772	4,753	42,525	12.6	1.50	DISTRICT OF COLUMBIA	3,843	46,368	9.0
977,780	215,269	1,193,049	22.0	42.21	**Total Mid-Atlantic**	188,458	1,381,507	15.8
50,273	11,510	61,783	22.9	2.19	VIRGINIA STATE	14,298	76,081	23.1
26,957	6,172	33,129	..	..	Richmond Dist.	7,667	40,796	..
23,316	5,338	28,654	..	..	Roanoke Dist.	6,631	35,285	..
363	40	403	11.0	.01	WEST VIRGINIA	30	433	7.4
14,489	9,364	23,853	64.6	.84	NORTH CAROLINA STATE	11,633	35,486	48.8
6,329	3,979	10,308	62.9	..	Charlotte Dist.	4,944	15,252	48.0
8,160	5,385	13,545	66.0	..	Raleigh Dist.	6,689	20,234	49.4
4,826	2,403	7,229	49.8	.26	SOUTH CAROLINA	2,853	10,082	39.5
3,837	2,014	5,851	52.5	.20	GEORGIA STATE	2,187	8,038	37.4
1,183	621	1,804	..	..	Atlanta Dist.	674	2,478	..
2,654	1,393	4,047	..	..	Savannah Dist.	1,513	5,560	..

Distillate Oilburners Operating, With 1947 Estimates (continued)

EXISTING SITUATION						1947 ESTIMATES		
Burners in Use June 1, 1945	New Users of Burners 6/1/45 to 12/31/46	Burners in Use 12/31/46	Rate of Gain Over 6/1/45	Percent of U.S. Total in Use	State	New Users 1947	Expected Total in Use 12/31/47	Gain Rate Over 12/31/46
13,572	7,439	21,011	54.8%	.73	FLORIDA	8,279	29,290	39.4%
87,360	32,770	120,130	37.5	4.23	**Total South Atlantic**	39,280	159,410	32.7
74,744	24,818	99,562	33.2	3.53	MICHIGAN STATE	22,588	122,150	22.7
52,401	17,397	69,798	..	..	Detroit Dist.	15,834	85,632	..
13,322	4,423	17,745	..	..	Grand Rapids Dist.	4,025	21,770	..
1,462	484	1,946	..	..	Escanaba Dist.	440	2,386	..
7,559	2,514	10,073	..	..	Saginaw Dist.	2,289	12,362	..
24,158	4,835	28,993	20.0	1.03	OHIO STATE	13,997	42,970	48.2
5,133	890	6,023	17.3	..	Cincinnati Dist.	2,573	8,596	42.7
9,169	1,835	11,004	20.0	..	Cleveland Dist.	5,304	16,308	48.2
1,703	469	2,199	29.1	..	Columbus Dist.	1,356	3,555	61.7
8,153	1,641	9,794	20.1	..	Toledo Dist.	4,744	14,538	48.4
21,660	8,481	30,141	39.2	1.07	INDIANA	6,719	36,860	22.3
99,980	21,541	121,521	21.5	4.31	ILLINOIS STATE	22,246	143,767	18.3
72,654	15,652	88,306	..	..	Chicago Dist.	16,164	104,470	..
14,300	3,083	17,383	..	..	Moline Dist.	3,181	20,564	..
6,582	1,418	8,000	..	..	Peoria Dist.	1,464	9,464	..
6,444	1,388	7,832	..	..	Springfield Dist.	1,437	9,269	..
56,661	15,936	72,597	28.1	2.57	WISCONSIN STATE	18,030	90,627	24.8
8,602	3,071	11,673	35.7	..	Green Bay Dist.	3,817	15,490	32.7
9,952	3,554	13,506	35.7	..	LaCrosse Dist.	4,416	17,922	32.7
38,107	9,311	47,418	24.4	..	Milwaukee Dist.	9,797	57,215	20.7
85,223	30,323	115,546	35.6	4.09	MINNESOTA STATE	34,941	150,487	30.2
5,284	1,880	7,164	..	..	Duluth Dist.	2,166	9,330	..
77,939	28,443	106,382	..	..	St. Paul Dist.	32,775	139,157	..
31,485	5,972	37,457	19.0	1.33	IOWA STATE	5,567	43,024	15.9
23,942	4,265	28,207	..	..	Des Moines Dist.	3,975	32,182	..
7,543	1,707	9,250	..	..	Sioux City Dist.	1,592	10,842	..
28,416	4,256	32,672	15.0	1.16	MISSOURI STATE	4,376	37,048	13.4
11,084	1,773	12,857	16.0	..	Kansas City Dist.	1,823	14,680	15.6
17,332	2,483	19,815	14.3	..	St. Louis Dist.	2,553	22,368	13.0
4,488	251	4,739	5.6	.17	KANSAS	338	5,077	7.1
22,638	2,228	24,866	10.0	.88	NEBRASKA STATE	2,646	27,512	10.6
4,084	402	4,486	..	..	North Platte Dist.	477	4,963	..
18,554	1,826	20,370	..	..	Omaha Dist.	2,169	22,539	..
7,928	4,131	12,059	52.1	.42	SOUTH DAKOTA	4,906	16,965	40.7
7,204	3,212	10,416	44.6	.37	NORTH DAKOTA	3,814	14,230	36.6
464,585	125,984	590,569	27.1	20.93	**Total Middle West**	140,168	730,737	23.7
2,166	866	3,032	40.0	.11	KENTUCKY STATE	693	3,725	22.8
496	198	694	..	..	Lexington Dist.	158	852	..
1,670	668	2,338	..	..	Louisville Dist.	535	2,873	..
3,528	1,976	5,504	56.0	.19	TENNESSEE	1,411	6,915	25.6
2,822	1,750	4,572	62.0	.16	ALABAMA	1,185	5,757	25.9
940	47	987	5.0	.03	MISSISSIPPI	38	1,025	3.8
1,646	98	1,744	5.9	.06	ARKANSAS	65	1,809	3.7
6,469	970	7,439	14.9	.26	LOUISIANA	776	8,215	10.4
1,176	24	1,200	2.0	.04	OKLAHOMA	13	1,213	1.1
12,936	5,692	18,628	44.0	.66	TEXAS	3,881	22,509	20.8
31,683	11,423	43,106	36.0	1.51	**Total Central South**	8,062	51,168	18.7
27,782	16,252	44,034	58.5	1.56	**Eight Mountain States**	12,613	56,647	28.6
79,859	22,219	102,078	27.8	3.62	WASHINGTON STATE	30,658	132,736	30.0
74,088	20,612	94,700	..	..	Seattle Dist.	28,441	123,141	..
5,771	1,607	6,778	..	..	Spokane Dist.	2,217	8,995	..
36,028	19,636	55,664	54.5	1.97	OREGON	12,268	67,932	22.0
114,858	25,269	140,127	22.0	4.97	CALIFORNIA	23,011	163,138	16.4
230,745	67,124	297,869	29.1	10.56	**Total Pacific Coast**	65,937	363,806	22.1
2,280,225	545,819	2,821,044	23.7	100.00	**TOTAL UNITED STATES**	532,787	3,358,831	19.1

How to Figure Fire Sizes

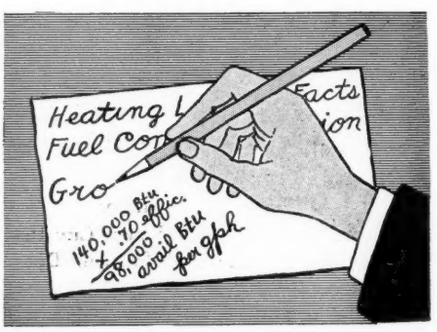
Nine Ways to Figure Gph Rates Needed for Conversion Jobs

by
J. W. Schulz

THERE'S NO GETTING around the fact that before you start to install a conversion oilburner, you should spend at least a few minutes figuring which size fire will be best for the particular furnace or boiler. Without knowing the proper gph rate, you may not even be sure you will install the right size burner, especially if you handle a make which comes in several small sizes, for example for up to 1.5, 2.0, 2.5, and 3.5 gph. Even if the smallest burner model you sell fires up to, say, 3.0 gph, sooner or later you will encounter a borderline case and have to do some figuring to decide if the 3.0 gph model can carry the heating load.

You may be one of the dyed-in-the-wool enthusiasts for oil heating who are fiercely determined to do the best job possible every time they get a chance. In that case, you'll have to spend more than a few minutes figuring the fire size to be used on a new installation. Where results are to be tops, so that later another burner dealer cannot cut the fuel consumption 40% by tearing out your burner and installing his, the firing rate must be figured very carefully beforehand. Here's why. Dealers who do not figure fire sizes carefully beforehand often wind up with fires about 50% oversize. They call this playing safe, for complaints about slow pick-up of heat on coldest mornings are invited by underfiring, whereas a bit of over-firing, at which these dealers aim, avoids such complaints. The catch is that aiming for a bit of overfiring "to play safe," together with taking a good guess at what the fire size should be, frequently results in giving about 2.0 gph to a boiler or furnace which needs about 1.25 gph for best overall results. Heavy over-firing cuts efficiency and increases fuel bills two ways. First, the oversize fire produces overly high stack temperature and makes the stack loss oversize. Second, the excessive gph rate causes the burner to be "on" little of the time on coldest days, "off" most of the time. This wastes oil, for maximum efficiency and fuel economy come of keeping the burner running more or less steadily on coldest mornings, where the characteristics of the heating plant permit this. After all, an automobile and an oilburner are similar in that they both waste fuel because of excessive starting and stopping, and both operate at peak efficiency for long, steady runs.

Ridding a poorly-planned installation of the penalties of over-firing would be simple if only the oil and air rates of the burner had to be lowered to arrive at the



maximum efficiency for the particular equipment. But a dealer plans a firebox to match the firing rate to be used in it, and where he winds up with over-firing he winds up with an oversize firebox. Usually the poorly-planned installation which has been over-fired needs a new, considerably-smaller firebox.

To correct under-firing, which sometimes is the result of failing to figure the gph rate properly before building the firebox, is as expensive as correcting over-firing, for again usually the firebox must be replaced. But few dealers who do sloppy work wind up with under-firing.

This plan has worked for several dealers who were gearing up their engineering, installation, and service work to win a reputation for fuel bills about one-third lower than resulted from buying competitors' burners. Figure the firing rates with care, using two or three methods for figuring, and apply excellent judgment on top of that. Aim to use the very lowest firing rates that will give adequate heating. Bear in mind that each gallon-per-hour of oil fired on a highly efficient installation gives extra heat, and that therefore 1.25 gph on an exemplary installation often gives as much heat per hour as 1.50 to 2.0 gph on an inefficient installation. (Incidentally, using this plan often leads to using for many small homes the lowest-capacity nozzles which work out well with pressure burners. Today, many dealers use 1.25 gph nozzles as their smallest size, declaring that lower-capacity nozzles are too likely to plug. To arrive at what they call the minimum practical firing rate for a pressure burner, some of these dealers use atomizing pressure as low as about 70 pounds.) The next step in the plan is to build an excellent firebox large enough for a firing rate about 20% higher than is planned for the job to begin with. By crowding this with fire, the dealer can use a somewhat higher firing rate later, if in his zeal to obtain the low stack temperatures and steady operation which give low oil bills, he winds up with insufficient flame on an installation or two. All this means great care in planning and completing each installation. This care is what puts the engineering into dealer operations, however, and is the very thing needed to produce exceptional installations.

Methods Enumerated For Figuring Gallon Per Hour Firing Rates

Here are methods for figuring gph rates:

1. *Btu Method*

Determine the total Btu load on the furnace or boiler ("Gross heating load," including allowance for piping and pick-up, and if necessary including an allowance for water heating), and divide this by the "available heat," in terms of Btu per hour, obtained from firing one gallon-per-hour of fueloil. The "available heat" from 1.0 gph is found by multiplying the number of Btu's in a gallon of the

oil by the efficiency at which the installation probably will operate. Estimate the efficiency, taking into account that the usual oilburner operates intermittently, not continuously, therefore runs at lower efficiency than during a continuous-firing test.

As an example: Suppose the *gross* load on a boiler or furnace is 1,000,000 Btu per hour, and that oil containing 140,000 Btu per gallon will be fired at 65% overall efficiency. The available heat per gph is obtained by multiplying 140,000 by .65, which gives 91,000 Btu. Dividing 91,000 into 1,000,000 gives 11 gph as the firing rate needed to carry the load.

Since all types of loads can be given numerically in terms of total Btu load on the furnace or boiler, this Btu method for figuring gph rates is applicable to all gph problems. It is highly recommended for engineers and others who aim to do precise work.

2. *Steam Heating Plants*

Plan simply to fire one gph for the first 200 sq. ft. of standing radiation, and fire an additional one-third gph for every additional 100 sq. ft. of standing steam radiation.

On this basis, you would fire 1.0 gph for 200 sq. ft. of standing steam radiation, 1-1/3 gph for 300 sq. ft., 1-2/3 gph for 400 sq. ft., 2.0 gph for 500 sq. ft., and 2-1/3 gph for 600 sq. ft.

This applies only to steam plants having insulated steam and return mains which are not usually long and which are in spaces kept at usual basement temperatures. Allow additional gph for exceptionally long mains, uninsulated pipes, and lines located in exceptionally cold places.

No extra allowance is needed for tank-type indirect water heaters used for year-round water heating, but for tankless heaters serving one bathroom and one family (of usual size and using usual amounts of hot water) it works out well in actual practice to add 50 to 75 sq. ft. of standing radiation load, depending on the size of the water heater and the size of the heating boiler, to the standing radiation load. For smallest boilers, which seemingly are more affected by the load of a tankless heater, the greater allowance of 75 sq. ft. of radiation is used.

3. *Hot Water Heating Plants of the Modern Forced-Circulation Type.*

First, and best by far, use the "Btu Method" given as #1 above, if you know the net Btu load of the radiation (which is about the same as the total Btu load of the rooms). Convert the net Btu to gross load on the boiler by adding a suitable piping and pick-up allowance. Usually 20% to 40% is suitable allowance. Small installations may need the 40% allowance.

Allow for a tankless water heater on the basis indicated in #2 for steam plants. That is, allow for additional net load of 12,000 to 18,000 Btu per hour on the boiler. The 12,000 Btu per hour equals 50 sq. ft. of steam radiation, while 18,000 equals 75 sq. ft. of steam radiation.

If you do not know the net Btu load of the radiation or the heat loss of the rooms, deduct one-sixth from the number of square feet of hot water radiation in the system, and use the resultant number in item #2, above, as though it were the number of square feet of steam radiation being used to heat the house. Important: In doing this, you are working on the assumption that the man who planned the modern forced-circulation hot water heating plant provided 20% more radiation for each room than he would have provided if he had been installing steam heat.

On this basis, if there is 1,200 sq. ft. of modern forced-circulation hot water radiation in a house, you would deduct one-sixth, which would give 1,000 as the equivalent in steam radiation. Item #2 would lead you to fire this at 3-2/3 gph.

Bear in mind that certain heating contractors seem to be installing, in their forced-circulation hot water heating plants, almost as much radiation as they would install if the systems were of the gravity circulation type. If you encounter this, use the method in item #4 which follows.

4. *Old-Style Gravity-Circulation Hot Water Heating Plants.*

You can consider these as having 50% more radiation than would be used in a steam plant for the same house. Therefore simply deduct one-third from the amount of radiation in the house, consider the result as steam radiation, and use the rule in item #2. That is, consider 600 sq. ft. of standing radiation in a gravity circulation hot water heating plant as 400 sq. ft. of standing steam radiation. Fire it 1-2/3 gph.

5. *Modern Forced-Circulation Warm-Air Heating Plants, and Winter Air Conditioners.*

a. It is best by far to use the Btu method covered in item #1.

b. OR, to take a short cut which sacrifices some accuracy, divide the *net* Btu load on the furnace by 75,000 to find the firing rate.

c. OR (slightly preferable to "b" since it permits you to make a suitable allowance for duct heat losses and for heat

pick-up), determine the *gross* Btu load on the furnace, and divide by 100,000 to determine the firing rate.

6. *Gravity-Circulation Warm-Air Heating Plants.*

Obtain the net Btu load by ascertaining the area, in square inches, of the basement warm air ducts or leaders connected to the furnace bonnet. Multiply the area of the first floor leaders by 111, of the second floor leaders by 167, and of the third floor leaders by 200. (That is, one square inch of leader area gives a first floor room 111 Btu per hour, a second floor room 167 Btu per hour, and a third floor room 200 Btu per hour.) Add a suitable allowance, to the sum-total, for duct heat loss and quick pick-up of heat; 20% to 40% allowance may be suitable. The result is the gross heating load on the furnace, which may be divided by 100,000 (roughly the available Btu's per hour from one gph used at 70% overall efficiency) to find out the gph rate needed.

Be sure to determine the gph rate also by methods #8 and #9, outlined below. Compare the three answers obtained, and use your best judgment in deciding how hard to fire the furnace.

7. *Power Boilers*

At about 65% overall efficiency, one gph produces three boiler horsepower from a power boiler. Therefore if you can expect about 65% efficiency, divide the horsepower required from any power boiler by three to determine the gph rate needed. Example: To produce rated output from a 150 hp. boiler, fire it 50 gph.

8. *Fuel Consumption Method*

For homes previously heated by coal, fire 1.0 gph where eight tons of coal were used yearly for heating, 1.2 gph for 10 tons, 1.4 gph for 12 tons, 1.6 gph for 14 tons, 1.8 gph for 16 tons, 2.0 for 18 tons, and so on, adding .1 gph for each additional ton of coal used yearly. For large jobs which previously used more than 50 tons of coal, simply figure that 1.0 gph is needed in place of ten tons of coal per year. Using 50 tons of coal a year, a heating plant would need 5.0 gph; using 100 tons a year, it would need 10 gph firing rate. With two heating boilers using the coal, fire each boiler at half the indicated gph rate.

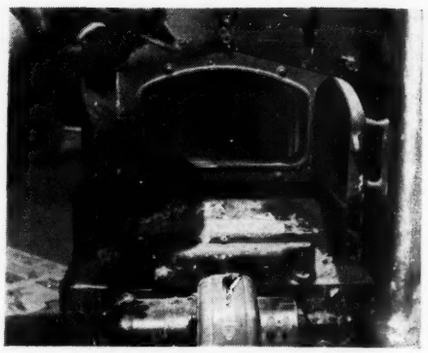
This method can be based on the previous fueloil consumption figures by figuring that 150 gallons of fueloil are equal to one ton of coal. If 1,500 gallons of oil were used yearly for heating, 10 tons of coal would have been used, on this basis, and the boiler or furnace should be fired 1.2 gph.

Do not use this method of figuring gph rates for steam heating plants, as such plants must be fired hard enough to fill all the radiators with steam within a reasonably short time after the burner starts. Using the fuel consumption method for figuring the firing rate would lead to under-firing a steam plant which has an excessive amount of radiation for the heat loss of the building. The radiators farthest from the boiler might not heat properly during a 15 or 20 minute oil burner "on" period, if the system was not especially good at distributing the steam properly to all the radiators. Trouble of this kind has occurred in buildings which were rock-wool insulated thoroughly after the steam heating plants were installed, and which therefore had far more radiation than matched the heat losses of the buildings.

For steam plants, use the methods covered in items #1 and #2 for figuring gph rates.

9. *Grate Area Method*

This method, like the fuel consumption method, should not be used if data are known which permit use of other methods which take net or gross heating load into account. The method is useful, however, where the aim is to fire a boiler or furnace hard enough to produce approximately the rated output from it. Caught short of information to use for determining the size firebox to install, and unable to check the heat losses of the building or the radiation or warm-air load, installation crews sometimes use this method simply because they are forced to.



We devised this rule some ten years ago, and recently altered it slightly after checking on the performance of installations for which the rule was used to determine the firebox sizes and firing rates. Revised, the rule is: Determine the area of the grate in square feet, and fire .6 gph for every one square foot of grate area. A small pipeless heater with 1.0 sq. ft. of grate area would be fired .6 gph; for 1.5 sq. ft. of grate you would fire .9 gph; for 2.0 sq. ft. of grate, 1.2 gph is needed; for 3.0 sq. ft., 1.8 gph is needed, and so on. To apply this rule to round-grate boilers, you simply must be able to convert grate diameters in inches into sq. ft. of grate area. To apply it to furnaces and boilers which have no grates, do your best to imagine grates in place, and take your measurements in the horizontal plane in which the firebed would lie.

With the exception of the Btu method (item #1) for figuring gph rates, these are thumb rules and short-cut methods, and should be used with caution by anyone applying them for the first time. For your first tries at figuring gph rates, always use at least two methods. The results may be widely different. If they are, you must use your best judgment in deciding which method will lead you to use the firing rate which will give the results you desire. As your last resort, always turn to the Btu method. Of course, judgment still is the important factor, for in using the Btu method you must estimate the overall efficiency at which the oil will be utilized, and the allowance for piping or duct heat losses, and for quick pick-up of heat when the heating plant and building are cold.

* * *

Note: This is the second in a series of articles which covers the details of the proper installation of pressure burners.

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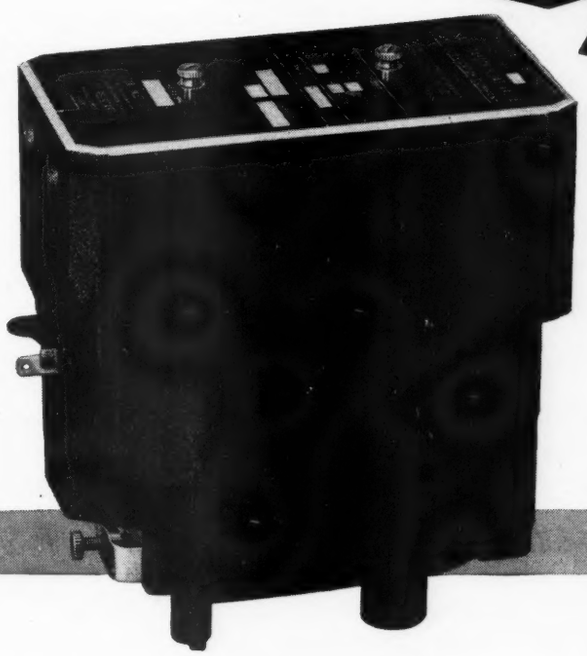

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With Draft Fan Control, High Fire Only

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Without Draft Fan Control

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Typical of the operation of these valves is the CRC-239 FF. When the room thermostat calls for heat, the valve opens to a hesitation point, at which a predetermined amount of fuel is fed to the burner for approximately one minute. At the end of this hesitation period the metering stem snaps to the full "on" position and the motor speed is increased simultaneously to provide full draft for high fire operation. When the room thermostat is satisfied, the heat motor returns the metering stem to the hesitation point within a few seconds. The fan continues to run at high speed for approximately two minutes to clear up the fire. At the end of this purge period the oil flow is cut down to pilot and fan speed is reduced to provide proper draft for the pilot.

CRC-239 FH operates in the same way, except that the induced draft fan is cut off at low fire, for which natural draft is used.

CRC-239 FN is for use with burners not having induced draft, or for those burners having continuous forced draft at both high and low fire.

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Firebox Construction for Heavy Oil

Firing Industrial Jobs Often Requires Structural Changes

by
Kalman Steiner*

THE FIRST TWO ARTICLES of this series, (December 1946, and February 1947) covered preliminary aspects and fundamental considerations in design of a combustion chamber for an industrial oilburner installation. It has been shown that the basis of design should be a heat release rate not exceeding 30,000 Btu per cu. ft. of combustion space per hour at maximum load; that in general the firebox shape must conform to the boiler design; and that refractories must be selected to accord to the particular service that will be encountered. This article will show how these general principles are applied to specific boiler types.

For the purposes of this article, boilers will be classified as follows:

I Water-leg Boilers
  A Cast Iron
  B Steel Fire-tube
    i Compact type
    ii Firebox type
  C Steel Water-tube
II Brickset Boilers
  A Horizontal return tubular (HRT)
  B Water-tube
III Miscellaneous
  A Scotch marine
  B Refractory-wall firebox (Economic)
  C Brickset firebox
  D Vertical

The above list is not intended to classify boilers by similarity in general features, performance characteristics, or applications. But design of the firebox will be largely determined by the above classification, that is, all water-leg boilers present related problems in firebox construction. The fact that a boiler may be built for low-pressure steam, hot-water, or high-pressure steam is not of consequence, insofar as the firebox construction is concerned, provided due regard is taken of the significance of boiler rating, as discussed in the December article.

*C. Hoffberger Co., Baltimore, Md.

Water-leg boilers are almost universally supported from the mud ring (the bottom of the water-leg section), which rests on either a metal or masonry base, and the refractory must protect the supporting base from flame temperature. Where such a boiler has already been in use for burning coal by hand firing, the base will seldom be of adequate height, and it will be necessary either to raise the boiler or to excavate a pit under it. Should the boiler have an especially narrow firebox, it might be well to consider using an entirely new and wider base, by which the boiler would be supported externally instead of under the water-leg. This is not difficult to accomplish in the case of any steel water-leg boiler, either high or low pressure, requiring only that gussets or angles be welded to the outside sheet just above the mud ring. On a cast-iron boiler, of course, welding is not feasible, but where conditions indicate that a wider firebox is imperative, then steel beams can be placed under the mud rings and supported from vertical columns in front and in back, to permit widening the firebox. When a new boiler is being set for oil firing, then certainly due consideration should be given to this improved method for widening the firebox.

Rear Firing of Boilers

The question is frequently raised as to whether a particular boiler should be fired from the front or from the rear. Nothing is gained by rear firing a boiler where the fire traverses the full length of the boiler, as in the steel "compact" type, or cast-iron sectional, especially when variable-flame regulation is employed. The draft tends to pull the fire backward, and when the burner is operating at low flame the draft will cause a short circuiting, drawing the fire up and back before it reaches the end of the firebox, thereby defeating the primary purpose of rear firing, which is to increase the length of flame travel. In the firebox boiler, however, where there is a short firebox under the front end of the long tube pass, then rear firing can be beneficial in lengthening the path of the flame. And since the flame travel is not long in either direction, the effect of the draft pulling the flame backward cannot cause any serious short circuiting even at low flame.

This discussion of water-leg boilers applies to all three cases—cast-iron, fire-tube and water-tube. The water-tube boiler, in addition to requiring a firebox, must also have a system of baffles to direct the combustion gases over the water tubes in the path most effective for heat absorption. In this respect, the water-leg class of water-tube boiler is similar to the more commonly brickset water-tube boiler, and discussion of baffles is reserved for consideration with the latter class.

Converting to Increase Output

Assume that a "compact" type of fire-tube boiler is to be converted from hand firing to oil firing, and that it is desired to obtain more output from it. This is a situation that frequently arises, for instance, in a heating plant that has two such boilers, each sized originally to carry 2/3 of the total load—a not uncommon practice. Suppose it is desired to install but one oilburner, of sufficient capacity for the entire load. The problem then is to design a firebox that will enable the boiler to develop 150% of its hand-fired rating, which will equal the total load. If, for instance, each boiler has a hand-fired rating of 6000 sq. ft. EDR and the total load is 9000 sq. ft., then the boiler to be oilfired will need a firebox designed for an output of 9000 sq. ft. EDR. Since 1 sq. ft. of steam radiation is equal to 240 Btu per hour, the total boiler output will be 2,160,000 Btu. Allowing 75% efficiency, the fuel input to the firebox will be equivalent to 2,880,000 Btu per hour. Dividing this last figure by the allowable 30,000 Btu per cu. ft. combustion space gives a requirement of 96 cu. ft. of furnace volume.

The width inside the water legs is 3.5 ft., the length is 6 ft., and the height from mud ring to crown sheet 2.5 ft., constituting a volume above the mud ring of 52½ cu. ft. Hence the remaining space of 43½ cu. ft. must be contained within the refractory below the mud ring. The width

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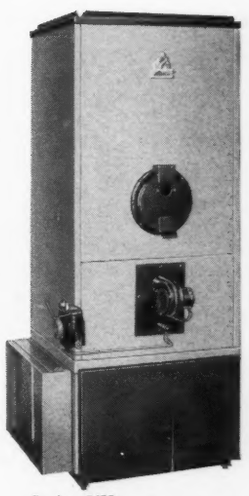

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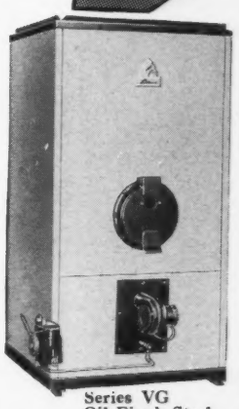

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and length within the refractory chamber are respectively 2.75 ft. and 5 ft., when no provision is made for external support as above mentioned. Obviously, the firebox height below the mud ring must be 3.15 ft. To this must be added the thickness of the floor and the height of the secondary air duct. The sum is the total distance below the mud ring that must be available. If part of this distance is supplied by the metal base, then only the remainder need be supplied by pitting.

For a second example, consider a high-pressure firebox boiler rated 143 boiler hp., i.e., containing 1430 sq. ft. of heating surface (boiler surface exposed to combustion gases on one side and to water on the other.) Suppose the plant using this boiler desires to add additional load, but if possible does not want to purchase an additional boiler. Investigation shows that the average coal consumption by stoker firing is about 3 tons daily, burned over 12 hrs. The coal being burned has a heating value of 12,500 Btu per lb., and the stoker efficiency is assumed at 65%. For these conditions, it would take about 4.15 lbs. coal per hour to develop a boiler hp (33,500 Btu per hour), which would establish the average load at around 125 hp. Of course, the peak load will be more than the average, perhaps 50% more. At any rate, with oil, it should be possible to develop the boiler to a continuous output of 200%, or in this case, 286 bhp. By a calculation similar to that made above, there is required a minimum combustion volume of 458 cu. ft. at the 30,000 Btu rate, but for an application like this, where the refractory is to be subjected to continuous firing at high ratings, many combustion men prefer to allow 2 cu. ft. per bhp which would call for 572 cu. ft. The boiler dimensions are such as would call for a setting height below the mud ring of 15 ft. In order to minimize the setting height, this kind of boiler can be rear fired with a furnace extension having a suspended arch. The use of external supporting gussets is almost imperative to gain additional combustion space.

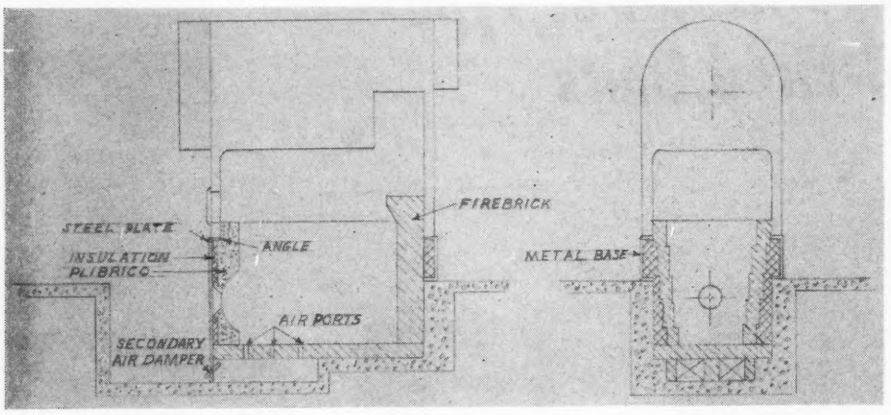

Fig. 1—*Compact type boiler set on standard metal base, with excavated pit.*

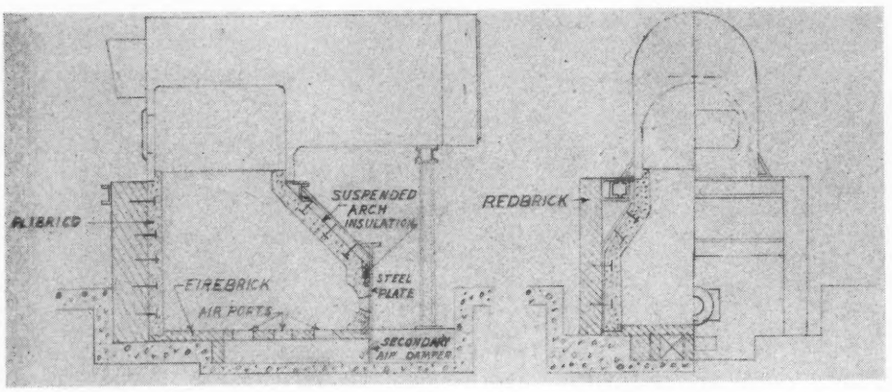

Fig. 2—*Firebox type boiler with water legs, set on high brick base, rear fired, with offset side walls and suspended rear arch to gain additional combustion volume.*

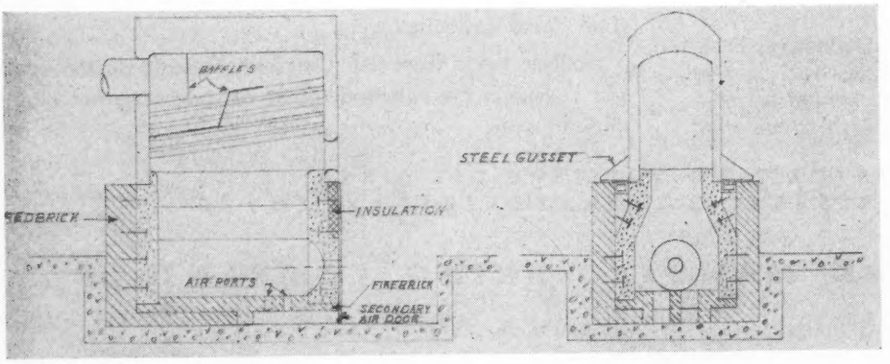

Fig. 3—*Water-tube boiler with water legs, set on high brick base and offset walls to gain additional combustion volume.*

Figs. 1 and 2 illustrate the two general methods of supporting water-leg boilers. Fig. 1 is the more conventional case of a metal base under the water leg, the base in turn resting on masonry that provides the additional furnace volume. This method is satisfactory for ratings up to about 150%. For higher ratings, up to 200%, the methods of Fig. 2 should be employed, in which external gussets support the boiler on masonry that is set wider than the water legs of the boiler. It should be noted that the general procedure is the same whether the setting is pitted below a floor line or the boiler is raised above the floor line.

Fig. 3 illustrated a case of a water-tube boiler with water legs. In this case, much additional combustion volume was gained by widening the furnace below the water legs, and using a transformation construction to bring the wide furnace cross section down to the water-leg cross section. Here also the method of support from the boiler side sheet is used. Note that the baffle arrangement creates three passes or directions of gas travel over the tubes.

The horizontal return tubular boiler, commonly called the HRT, is always set completely in brickwork, since it has no

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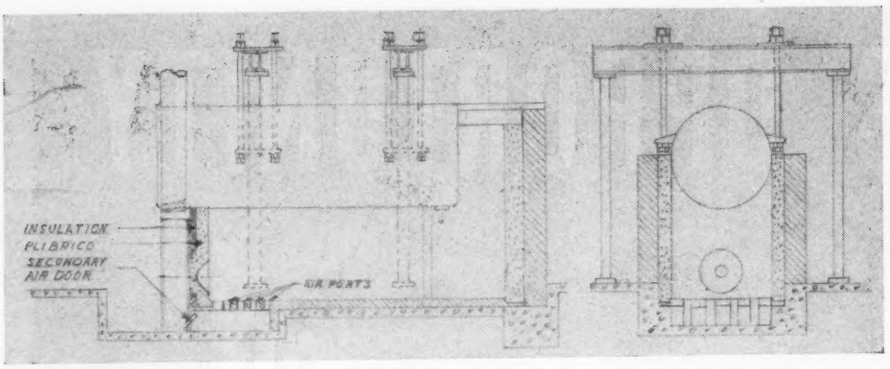

Fig. 4—*Horizontal return tubular boiler suspended from overhead steel beams.*

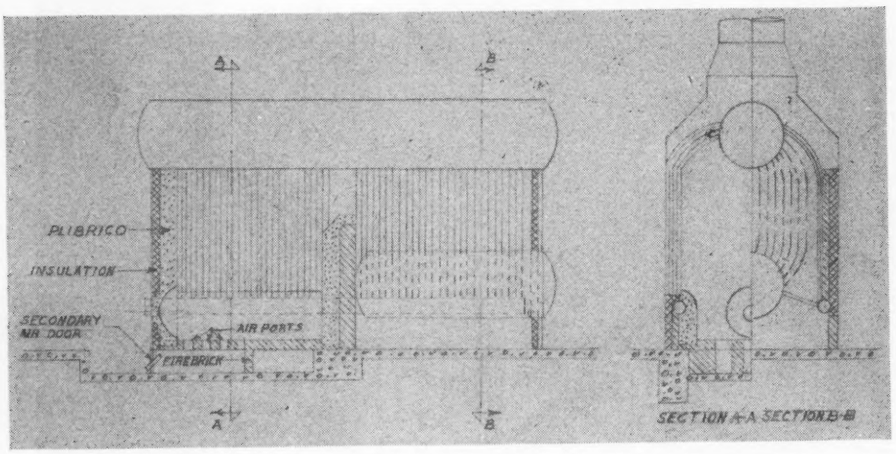

Fig. 5—*Water-tube boiler having water-wall furnace.*

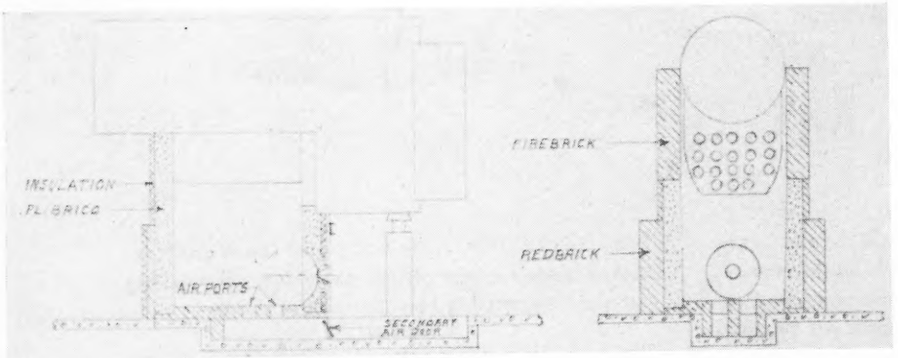

Fig. 6—*Rear-fired Economic type boiler having refractory firebox walls.*

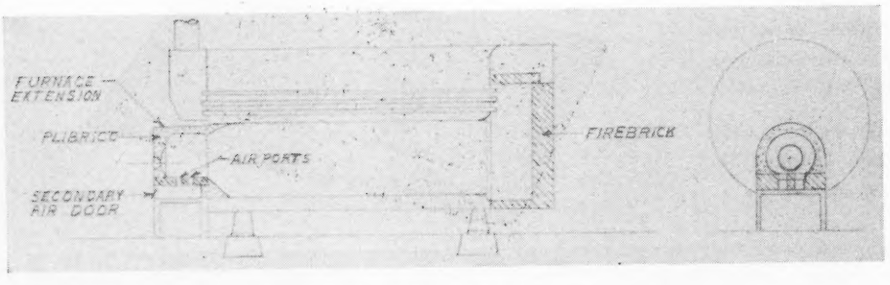

Fig. 7—*Scotch marine boiler with front steel furnace extension.*

water legs. Sometimes the brick walls ar enclosed in a steel casing. The boiler : self is supported from lugs riveted to the shell, the lugs being either supported from the red brick walls or from overhead steel rods dropped from beams. When a coal-fired HRT is converted to oil, if high ove load is to be carried, a deep pit will ! required. If there is any question as the adequacy of the foundation after th pit is dug, the weight of the boiler when supported from the side walls should be transferred to beams set overhead, by means of steel rods. A typical HRT oil fired setting is illustrated in Fig. 4.

The second important group of brick-set boilers includes the various styles of water-tube types. Practically all boilers larger than 300 hp are in this group, and in sizes they come up to the vast steam generators used in power plants. A discussion of these boilers would constitute a treatise in steam power plants; this article illustrates one of the smaller boilers with an oilfired setting but cannot enter into the rather profound combustion engineering involved in the design. Fig. 5 shows a water-tube boiler with water walls, that is, with vertical water tubes along the sides of the firebox. The illustration indicates the several gas passes over the tube accomplished by means of baffles.

The economic type boiler is a fire-tube boiler with one short pass and one long pass, there being a refractory lined firebox in front of the short pass and under the front of the long pass. For reasons of securing maximum combustion space, it is almost essential, when converting one from hand firing, to arrange the new, lower refractory flush with the original refractory in the upper side walls and front wall. These boilers may be either front fired or rear fired. Where a boiler of this type is purchased originally for oilfiring, there is some advantage in having it shipped from the factory without the customary firebox lining, so that a single, continuous refractory lining may be constructed after the boiler has been set in place. Fig. 6 gives a general arrangement for rear firing.

The scotch marine boiler makes an ideal oilfired steam generator. Its long, cylindrical firebox, completely surrounded by water-backed surface, makes it a quick steamer because of the large amount of radiant heat absorbed directly into the internal furnace walls. The oilburner must

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Thermodrive is designed to regulate the fan speed in a forced warm air heating system so as to give more even room temperatures, less stratification, more comfort.

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A warm air "sample" is continuously drawn from the bonnet and discharged over a thermostatic bellows, which in turn actuates a sliding sheave of a split pulley. This changes its effective diameter and results in either increased or decreased speed of the fan.

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be mounted on a short steel furnace extension or dutch oven, for two reasons. The first is that were the burner mounted directly on the boiler front, there would be congestion of wiring and oil piping under the flue outlet; the second is that the dutch oven adds the combustion volume that permits developing high ratings. An important item in design of the steel extension is to provide means for distributing secondary air completely around the fire, because the confined space at the furnace throat blocks free circulation to the top of the fire from a source under the burner such as is standard with other boiler types. About the only satisfactory refractory for a scotch is plastic formed as a cylinder around the steel extension. This lining need not be taken into the boiler tube beyond the front rivet seam. It is also good practice to construct a ring of plastic around the rear rivet seam—the so-called horse collar. The layout in Fig. 7 is typical of scotch marine design for the oilburner installation.

It sometimes happens that an excavation operation, when making the pit under a boiler, reveals an underground water condition. The simplest way to handle this is to use a suction pump to keep the excavation dry while digging and laying the new concrete. In the floor of the pit, outside of the boiler, a sump can be sunk for use with a permanent, float-operated, sump pump. This method usually keeps the boiler setting quite dry. In aggravated cases, the boiler pit can be lined with a steel pan, which makes a completely waterproof housing for the firebox. There are also methods of waterproofing the concrete, but because of the high temperatures prevailing, it is generally safer to depend upon a pump or steel pan than on chemical treatment of the concrete.

Many times a boiler has to be converted from coalfiring to oilfiring during a weekend shutdown, so as to minimize the outage time of the boiler. A useful time saver is a special quick setting concrete, which sets up in a few hours and after 24 hours has the strength of ordinary concrete that has set several weeks. There are also available special concretes having high heat resistance, which can be quite useful in preparing foundations for fireboxes.

The several illustrations of this article show typical floor constructions employing checkered floors for introduction and distribution of secondary air. Aside from the function of introducing the air at strategic locations in the firebox, the checkered floor arrangement shields the secondary air ports from direct exposure to the fire, preventing radiation of heat to the pit floor under the burner. These drawings also give examples of the use of insulation against the steel plate and other portions of the setting that require protection from heat. And finally, the drawings indicate how side walls, rear or bridge walls, and front walls are constructed to meet the varying needs of different boilers.

Indiana Standard Allocates Gasoline Supply to Dealers

IN THE INTEREST of fair treatment for all its customers, Standard Oil Co. of Indiana put into effect on June 24 an allocation system for distribution of gasoline for June, July and August. The plan will provide supplies approximately equal to the total quantity supplied during the same period last year. The company's gasoline sales have shown an increase of 15% over a year ago. Agents and dealers, in turn, will limit deliveries to customers. Individual dealers will make the ultimate decision on how to distribute to customers.

Officials at Standard said the allocation plan was developed only because they could not meet all demands even after using all available pipeline capacity, using other available transportation to bring in products from other areas, and running its refineries at full capacity for many months. Anticipated output of gasoline from Standard of Indiana's refineries for the three-months' period is expected to be 13% above last year, but, the making of large amounts of heating oil during the past winter and spring seriously reduced gasoline yields during that period. Coupled with an unexpectedly heavy demand, from the farm trade, particularly, the company's stocks of gasoline have dropped to a level 30% below that of last year. Refinery strikes, not all of which are settled and which resulted in a loss of about 13 million barrels of total product since January 1, also have affected adversely some companies.

Within a few days after Indiana's action a number of other Midwest suppliers made similar announcements—including Shell, Phillips and Socony-Vacuum.

Bill Kemp Succumbs After Two-Week Illness

WILLIAM ALBERT KEMP, 55, passed away at Evanston, Ill., June 15, following an illness of two weeks. He was sales manager of the Pump Division of the Sundstrand Machine Tool Co., Rockford, Ill., and was prominent in industry affairs. He retired at the April meeting of Oil Heat Institute as chairman of the Accessory Division, though he remained as a director and chairman of the membership committee.

Bill Kemp was one of the oldest members of the domestic oilheating industry in years of service. He was connected with the Doble Steam Car Company at Detroit when the automotive burner was adapted to domestic heating, and participated in the installation at Detroit, of a Nokol burner in what is believed to have been the first residential oilheating installation. Following a long connection with the American Nokol Company, he became associated with the Mid-West Oil Burner Company at Chicago, and Silent Glow Oil Burner Corporation at Hartford, Conn., from which he went to Sundstrand twelve years ago.

Funeral services were held at Glencoe, Ill., June 17. Surviving are his wife, Mrs. Helen Kemp and two daughters, Virginia and Marjory, all of Glencoe.

John R. Collette has been appointed manager of field sales, Fitzgibbons Boiler Co., New York 17, N. Y. and will consolidate the sales activities of more than sixty branches under a new department to be called the Field Sales Division. His experience in sales and in the heating business includes positions with Pacific Boiler Corp., where he rose to sales vice president, and as manager, Firebox Boiler Div., Titusville Iron Works Div.

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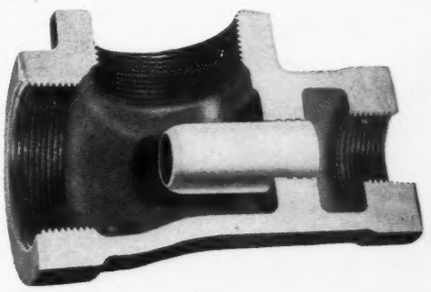
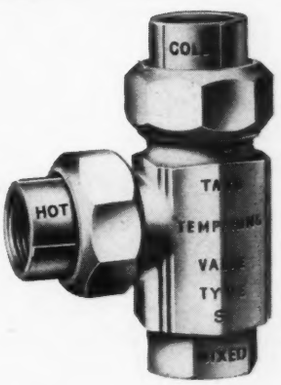
TACO-MATIC protects tankless heater operation by maintaining the boiler water at 180°F. It closes tightly unless temperature of the boiler water passing through it is above approximately 185°F. With this assured supply of hot boiler water circulating around its coils, your tankless heater just can't fail to supply its full rating. TACO-MATIC also modulates the heating system temperature!



TACO FLO-JET

Taco Flo-Jet uses the same venturi principle that made Taco Venturi fittings so famous. It converts the pressure of the Taco circulator into a venturi pull on the water surrounding the tankless heater coils. Taco Flo-Jet corrects many a job that had wrong way circulation of cool return water around tankless coils instead of into the boiler.



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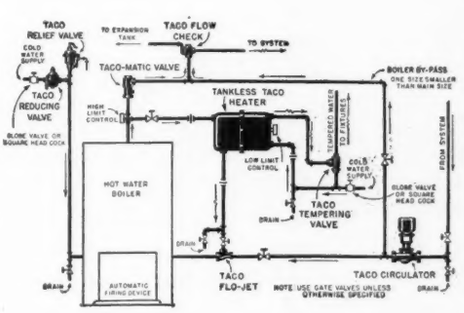
Taco's famous type S Tempering Valve stretches out the capacity of tankless heaters. No such thing as wasting water when you turn on the faucet because the first water from a tankless is too hot. Taco's Tempering valve mixes just the right amount of cold water with the hot from the tankless heater to assure 135°-145°F. water constantly at the taps.

Performance of storage heaters as well as tankless is improved by following this installation diagram.



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PSC Orders Utilities to Furnish Gas to 1,858 L. I. Home Owners

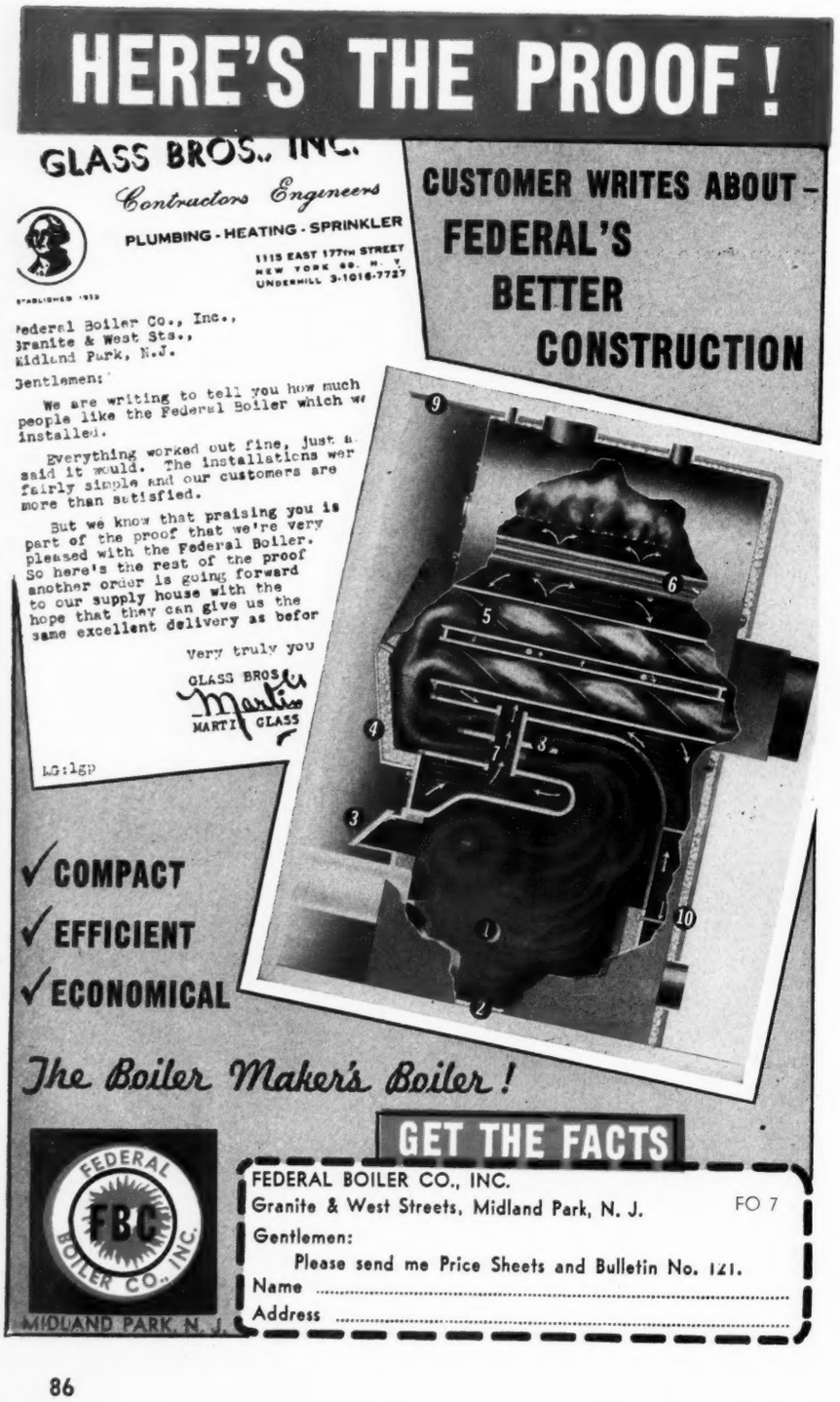
AN ORDER, issued June 28 by the Public Service Commission, directs the Long Island Lighting Co., the Nassau and Suffolk Lighting Co. and the Queens Borough Gas and Electric Co., operating respectively in Nassau, Suffolk and Queens Counties, New York, to furnish gas for heating to 1,858 home owners who had applied prior to May 1. Previously the company had received permission from the commission not to supply these consumers because of limited production facilities.

In an opinion accompanying the decision, Commissioner Spencer B. Eddy estimated that the companies could furnish sufficient gas to supply all customers on days of normal temperature, but that there was likely to be a shortage of gas, affecting both old and new customers, when the temperature drops to 10 degrees above zero, or lower.

Despite this threat, four of the five members of the commission endorsed Mr. Eddy's view that the utilities must supply the new consumers because of what he called an emergency. Many of the persons affected by the order are veterans.

Mr. Eddy was sharply critical of the three utilities and their parent company, the Long Island Lighting Co., charging that they had failed to foresee the growing demand for service and plan accordingly. He cited as an example, the system's estimate of 6,000 new customers in 1946, later amended to 9,000, and 15,000, the actual number who applied for service.

On February 7 the companies obtained permission to refuse applications for heating by gas, with certain numerous exceptions. On May 1, the commission permitted the companies to deny gas for heating to all new consumers except hardship cases. The proceedings just ended grew out of a number of complaints by prospective consumers that their applications for gas heating service had been filed prior to May 1.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Everything worked out fine, just as said it would. The installations were fairly simple and our customers are more than satisfied.
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Evans Holds Sales Clinic; Completes Move to New Plant

"WE ARE NOW ENTERING a competitive market in the home appliance field," R. B. Evans, vice president in charge of the Heating and Appliance Div., Evans Products Co., Plymouth, Mich., told district managers at the first post-war sales training clinic held by the division.

The clinic, attended by Evans five district managers, consisted of a week-long schedule of sales, service and engineering training, including tours of the manufacturing plant, laboratory demonstrations, review of product features, sales promotion, advertising and methods of conducting dealer meetings.

Territory allocations were discussed by Don Lawrence, while C. C. Van Wagoner conducted service clinics and demonstrations. R. H. Gass, sales promotion manager, and P. A. Shedlesky, public relations department, explained advertising and sales promotion programs. Advertising in the seller's market was discussed by A. Conkey, representing Evans advertising agency.

An earlier announcement by Mr. Evans revealed that the movement of all sales, service and manufacturing facilities of the Division to its new plant at Plymouth, Mich., had been completed. The plant had

been purchased in August 1945 and movement on a division by division basis continued throughout 1946. Three hundred and fifty thousand sq. ft. of floor space are available, and with all manufacturing facilities on one floor, straight line production and assembly is provided for Evans oilburning space heaters and automatic water heaters.

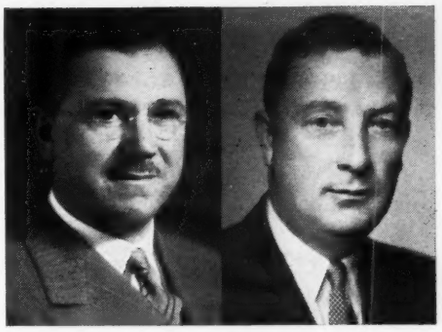
U. S. Department of Labor Fueloil Prices April

FIELD INVESTIGATORS for the Department of Labor monthly check prices of principal fuels in several cities in each section of the country. Getting retail quotations from various supplies in each market, the prices are averaged and published. Those in the table that follow were taken April 15 (cents per gallon):

	Range	No. 1	No. 2	No. 3
Boston	11.30	11.15	9.40	..
Bridgeport	10.80	10.63	9.20	..
Fall River	..	..	9.83	..
Manchester	12.30	11.80	10.20	..
New Haven	..	..	9.10	..
Portland, Me.	11.20	11.20	9.50	..
Providence	..	10.92	9.36	..
Buffalo	12.20	..	11.00	11.00
Newark	10.30	10.30	9.20	..
*New York	..	11.32	9.54	..
Philadelphia	..	10.62	9.16	..
Rochester	..	12.30	10.60	..
*Chicago	10.38	10.20	9.69	9.69
**Cleveland	..	..	..	..
**Detroit	..	10.40	9.89	9.37
*Des Moines	..	10.14	9.61	9.61
*Kansas City	..	9.59	9.18	8.82
Milwaukee	..	10.60	10.10	10.10
Minneapolis	10.70	10.70	10.00	10.00
Omaha	..	10.00	9.50	9.50
St. Louis	..	..	..	..
St. Paul	10.70	10.70	10.00	10.00
Baltimore	..	10.60	9.70	..
Norfolk	..	11.00	9.30	..
Richmond	..	11.12	9.38	..
Washington	..	11.10	10.10	..
Charleston, S. C.	..	11.80	9.50	..
Jacksonville	..	11.90	10.45	..
Savannah	..	12.18	10.53	..
**New Orleans	..	11.33	9.89	9.90
Portland, Ore.	..	10.75	9.25	5.24
***San Francisco	..	10.46	8.92	5.00
**Seattle	..	11.49	9.95	5.65

* Price includes 2% sales tax.
** Price includes 3% sales tax.
*** Price includes 2½% sales tax.

Alexander Fraser has been elected president and a director, Shell Union Oil Corp., effective July 1 and will be succeeded as president of Shell Oil Co., Inc., a wholly owned operating subsidiary, by *H. S. M. Burns*. Mr. Fraser, who succeeds R. G. A. van der Woude, retiring on July 1, has been associated with Shell since shortly after World War I. He became president of Shell Petroleum Corp., St. Louis in 1933 and in 1939, when the company's United States operations were combined in a single operating company, became president of Shell Oil Co., Inc. Mr. Burns' association with Shell covers a twenty year period. In 1946 he returned from service abroad with the company, mostly in Colombia, and became Shell Oil's senior vice president.



Fraser Burns

Most Federal Controls Removed From Home Building

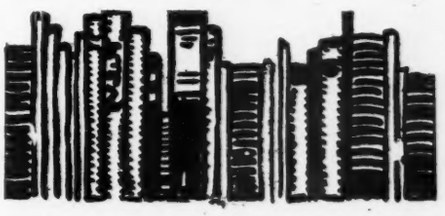
FEDERAL HOUSING PERMITS required of those who want to build homes for themselves or for veterans were abolished June 1. The limit on the number of bathroom fixtures in a new house has been removed, and the 1,500 square foot limitation on houses has been expanded to 2,000 square feet.

Though the construction limitation order, VHP-1, is still in force, small job allowances have been increased from $400 for dwellings to $1,000 (conversion oilburners are exempt from these provisions) and from $1,000 to $2,500 for commercial and small industrial buildings. Veterans still have preference in buying or renting homes built for sale or rent, and houses must be built for year-round occupancy.

Present building estimates predict 725,000 new housing units will be started this year, instead of the 1,000,000 anticipated. Starts in May are estimated at 69,000 this year, against 67,100 a year ago, bringing the total for the first five months this year up to 280,300, compared with 346,000 starts in the same period last year. Completions through May this year have totalled 300,000 against 128,600 in the first five months of 1946.

A Bureau of Labor Statistics survey shows that veterans cannot afford to pay more than $6,000 for a house, but the homes started in the first three months this year cost $5,250 exclusive of land cost and builders' profit. A fourth of the 1-family houses to be built were to cost the builders $7,250 or more. Adding land and other items, selling prices will range betwen $7,000 and $8,000 for these homes.

Adrian O. Holmberg has been elected vice president for manufacturing, National Radiator Corp., Johnstown, Pa., succeeding E. W. Longacre. Mr. Holmberg formerly was manager of several manufacturing divisions of A. O. Smith Corp., Milwaukee. Mr. Longacre has been in charge of National manufacturing for twenty years and will act in a consultive capacity when he returns from an extended leave of absence.



THE BOOK SHELF

Air Conditioning Book Chiefly on Refrigeration

AIR CONDITIONING and Elements of Refrigeration is a new book by Samuel P. Brown, staff engineer for Cloverdale and Colpitts, consulting engineers, New York. The book is based on a text formerly used in the classroom at Delahanty Institute, New York, in the resident course in air conditioning. Mr. Brown formerly was chief instructor at the Institute, and is a member of the board of directors. The book is designed for students with a high school education or its equivalent.

Methods of calculation of heating and cooling loads are presented, as well as means of heating and cooling equipment installation. Selection of equipment, automatic controls and the design of air ducts and piping systems are covered. Refrigeration theory, application and equipment selection also are presented.

Text and illustrations cover 638 pages 6 x 9 inches. Bound in cloth, the book sells for $6.00.

Possible Oil Shortages Only Local, Say Officials

INTERIOR SECRETARY KRUG'S OIL conference, June 17, at Washington was told that gasoline and oil shortages during the next year would be only local if conditions could be maintained at about present levels. Max Ball, director of the Interior Department's oil and gas division, told a press conference that the outlook is for only spotty shortages, but a coal strike, a tanker strike of more than 12 hours' duration, or laying up of Maritime Commission tankers on June 30 would be disastrous. The conference brought together representatives of 17 federal agencies, and two oil industry men.

Most any shortage is likely to be confined to spots in the Middle West, Ball believes. The outlook by type of product follows:

Natural Gas: Shortages from the Appalachian Mountains to west of the Missouri River will be sufficient to shut down industries. Men will be out of work, homes will be unheated and meals uncooked. The East may do "pretty well" since it is not as dependent on natural gas as the West.

Gasoline: If tourist travel is heavy this summer, some people will not be able to get gasoline in August and September. The acute spot will be in the Middle West.

Distillates: The greatest impact of this shortage will come in mid-winter. "If one or two things go wrong, there'll be cold homes this winter." Mr. Ball advised filling of all storage now.

Residual Fuels: The greatest trouble here will be again in the Middle West where the fuels are used industrially, and some ships also may feel the shortage.

Liquid Petroleum Gas: Spot shortages probably are in sight, but they may not be severe or extensive. As yet big gas companies have not been able to get firm commitments for stand-by needs.

In the meantime reports from most sections of the country indicate that major suppliers are not accepting new jobber accounts for distillates or residuals, and some are accepting contracts from old accounts only to the gallonage supplied during the last heating season. Most expect that they will be able to increase delivery somewhat beyond the contract amount.

Opinions differ on the probable extent of shortages in the different parts of the country. Overall petroleum supply last heating season was 2.2% in excess of the demand. Allowing for a 20% increase in distillate heating demand this coming winter, the predicted total oil supply will be only 0.6% in excess of demand. Though the overall demand is up about 20% for the whole country, the percentage of increase is going to be greater in some regions, with little or no increase in transportation or storage facilities.

One authority has calculated that the industry might get by the winter without too much trouble if all industry and consumer storage could be full on the last of November. The succeeding three months represent about 56% of the year's heating demand, but with storage full and transportation facilities working at peak capacity it is believed the industry could avoid hardship.

Oil men generally have been encouraged in recent weeks as daily crude runs to stills have been climbing close to 5,200,000 barrels a day. It is pointed out that such record volumes of crude refining over the summer months will make possible

TRI-ROTOR PUMPS HANDLE SINCLAIR PRODUCTS
Another leading oil company using Yale & Towne's TRI-ROTOR positive displacement pump for truck tank and bulk station transfer work . . . is Sinclair Refining Company.
The reason for the wide acceptance of TRI-ROTOR Pumps is the unique pumping principle which combines, in one pump, the outstanding features of a rotary pump and a piston type pump—high volumetric efficiency and positive handling characteristics.
Variable Volume Control reduces over-heating, chewing, foaming, and agitating the liquid. With only three moving parts, operating and maintenance costs are low.
Three head styles: Solid, By-pass, Variable Volume—optional and interchangeable—for all truck pump installations. Size 5 G.P.M. to 200 G.P.M.
Send specifications for your pump requirements to The Yale & Towne Manufacturing Company, 213 Henry Street, Stamford, Conn., U.S.A.
ECONOMICAL — ROTARY ACTION
PROTECTIVE — PISTON ACTION
ONLY TRI-ROTOR GIVES YOU BOTH IN ONE PUMP
TRADE YALE MARK
CLAIR
MAKERS OF THE FAMOUS YALE LINES
OF LOCKS, HARDWARE, HOISTS AND INDUSTRIAL TRUCKS

fireye

PREVENTS EXPLOSIONS

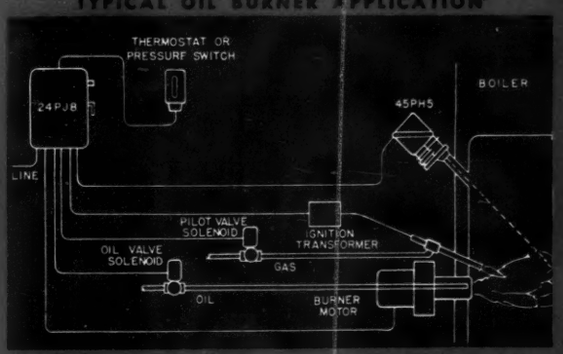
THE SAFE • MODERN *Electronic* COMBUSTION SAFEGUARD FOR OIL • GAS • PULVERIZED COAL BURNERS

A Complete Combustion Control System providing:

- CONTINUOUS *Electronic* MONITORING OF OIL OR GAS FLAME
- PROGRAMMING CONTROL FOR AUTOMATIC IGNITION SYSTEMS
- BOILER WATER LEVEL CONTROL AND LOW LEVEL SAFEGUARD

Programming control type 24PJ8 for all full automatic ignition gas and oil burner installations.

TYPICAL OIL BURNER APPLICATION



Photoelectric scanner type 45PH5 for automatic ignition oil burner installations.

Flame Rod 45JP1 for monitoring gas pilot flame on automatic ignition oil burner installation.

NOW AVAILABLE TO EQUIPMENT MANUFACTURERS, JOBBERS AND DISTRIBUTORS

Send for Bulletin 604

COMBUSTION CONTROL CORPORATION

Flame Failure Safeguards fireye *Boiler Feedwater Controls*

77 BROADWAY, CAMBRIDGE 42 MASS.

going into the heating season with an adequate stock of heating oils.

Heating oil prices were advanced in the Middle West on June 9, when Standard of Indiana raised light oil a half cent and upped residuals 0.3 cents. On June 17 Socony-Vacuum raised East Coast tank-car quotations on No. 5 fuel 20 cents a barrel, and No. 6 oil 30 cents a barrel. East Coast distillate prices were not advanced.

◈

Warn Canadians Again On Oil Supply

CANADIAN HOUSEHOLDERS again have been warned that there is a scarcity of fueloil which, according to Rt. Hon. C. D. Howe, Minister of Reconstruction and Finance, "is not only continent-wide, but world-wide."

Mr. Howe's warning was echoed by executives of some of the leading oil companies in Canada. "We will be able to fulfill all our present contracts," said A. D. Cadman, assistant general sales manager, Eastern Canada, Shell Oil Company, "but we cannot promise that any new contracts will be signed." Mr. Cadman also said that only those consumers who have a direct line of contracts leading to the oil companies would be perfectly sure of their oil.

W. T. A. Bell, general manager of the Imperial Oil, Ltd. for the Montreal district, said the Imperial Oil at the present time was not taking any more new accounts. "We are working diligently on the situation," he said, "and while it is difficult to predict what the situation will be at the start of the next heating season, we hope we will be able to take care of our existing customers." He added that anyone intending to install an oil burner, whether for private or industrial use, should make sure he has a dependable source of supply.

The main reason for the shortage of fueloil is the shortage of steel and coal, according to oil company officials. All the major oil companies are in need of tanks for storage and transportation, refinery equipment and building materials for expansion purposes. Coal strikes in the U. S. caused a run on oil heaters and raised the demand for fueloil far above that anticipated.

The leading oil companies in Montreal realize the seriousness of the situation and are asking the cooperation of the public. "In the summer, with the temperature in the 70s and 80s, it is difficult for people to believe that they might find themselves without heat in the winter," one executive said. "That is why we are banding together to make the public aware of the situation now. Later on in the year it might be too late."

◈

S. A. Swensrud has resigned as executive vice president and director, Standard Oil Co. (Ohio) to become executive vice president and director, Gulf Oil Corp. The office of executive vice president in Standard will not be filled and the department heads previously functioning thereunder will report directly to the office of the president.

Sid Harvey, president, Sid Harvey, Inc., Valley Stream, N. Y., recently was elected president of the Long Island Choral Society for the 1947-48 season. Auditions will be held in September.

DEALERS—here's a FLOOR FURNACE you can sell and forget

The original oil burning floor furnace, Kresky is the only one with forced air circulation bearing the Underwriters' label. Four sizes . . . easily installed . . . takes as little as 30" clearance. ★ Altho unprecedented demands necessarily limit current shipments to old customers, Kresky invites negotiations from live dealers for territories still open.

Listed By Underwriters' Laboratories, Inc.

KRESKY MANUFACTURING COMPANY
Pioneers in Oil Burning Equipment Since 1910
PETALUMA, CALIFORNIA

Kresky Oil BURNERS

HEATING • COOKING • HOT WATER • INDUSTRIAL

Pezzillo HOT WATER CIRCULATOR

- **Complete Motor and Pump manufactured in our own factory**
- **External starting device**
- **Thermal overload protector with automatic reset**
- **Full floating—rubber mounted**
- **Quiet**
- **Dependable**
- **Efficient**
- **Fully guaranteed**

Here is the modern circulator for all Hot Water Heating Systems. The simplicity of design brought about through the elimination of superfluous parts assures dependable operation, longer life and maximum performance. Write for performance and installation data, Bulletin #2.

PEZZILLO PUMP CO.

1343 W. CUMBERLAND ST.
PHILADELPHIA 32, PA.

fueloil & oil heat

Predicts Little Change In Gas Manufacturing

METHODS OF MANUFACTURING city gas will not change materially in the immediate future, gas men were told at their New York conference of the Technical Section of the American Gas Association, June 2 to 4. Dr. A. R. Powell, associate director of research for Koppers Co., Pittsburgh, indicated that present methods and techniques probably would continue.

Future raw materials for gas making in the Northeast section of the country will continue to be chiefly bituminous coal and heavy fueloil, he said. Relatively small quantities of liquefied petroleum gases will be used for extreme peaks. Low temperature carbonization of coal is of no future interest to the city gas companies, he said, and high temperature carbonization of soft coal will continue to be carried out on large by-product coke ovens with future technical developments to decrease gas cost by improvement of the plant and process, and by finding new uses for its byproducts. He also indicated that location of high temperature carbonization plants near the point of consumption is thus far more economical than placement at the coal mine.

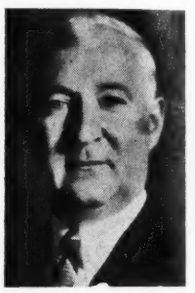
Carburetted water gas, made from soft coal and heavy oil, will continue to be the chief constitutent of city gas for years to come, Dr. Powell indicated. German processes for the complete gasification of coal are not yet suitable for use in this country without further research and improvement, and he does not expect that gas made in combination with the manufacture of some other product (synthetic oil) will show much promise for future cheaper production of distributed gas. Refinery oil gas, LP gas and natural gas will be used mainly by converting or mixing as a substitute for fueloil in gas enrichment, or to increase capacity of water gas plants during peak load periods.

◈

J. A. Ariano, New York, N. Y., has been appointed representative for Illinois Testing Laboratories, Chicago, handling the complete line of Alnor instruments. He succeeds Walton & Torrey, former representatives.

John D. Forlini recently joined Broadway Maintenance-Conditioned Air Corp., New York, N. Y. The firm is metropolitan New York dealer for Airtemp and Mr. Forlini will supervise the retail heating division in the boroughs of Manhattan and Queens.

John A. Bennan, chairman, Jefferson Electric Co., Bellwood, Ill., passed away April 17 at the age of 69. With James C. Daley, he established the company in 1915 for the manufacture of small transformers, from which it expanded to produce transformers for a variety of uses, including oilburners. The company's activities include important development and manufacturing work during both World Wars. Mr. Bennan was born in Moira, N. Y. and was a past member of the board of directors, NEMA. Surviving are three sons and a daughter.



SUMMERTIME IS *General Time*

Summertime can be a busy season for those who actively push GENERAL filters. Get your customers lined up with a new fuel oil filter before the next heating season, and they'll be glad you recommended the *best* fuel oil filter available, GENERAL.

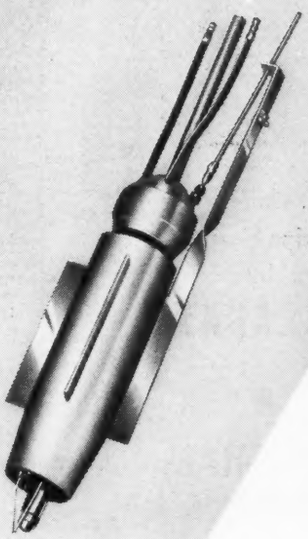
write *direct or to your nearest jobber for information on the GENERAL line of fuel oil filters.*

FACTORY REPRESENTATIVES: WILLIAM J. DEBLER & SONS, Newark, N. J., Philadelphia, Pa., Brookline, Mass.; V. B. KATHE, Vancouver, Wash.; WESTERN SALES COMPANY, San Francisco, Cal.; W. V. NUTTALL COMPANY, Salt Lake City, Utah; B. E. HOWENSTEIN, St. Louis, Mo.; L. E. SCHULEIN COMPANY, Chicago, Illinois; GRANSE CORPORATION, St. Paul, Minn.; RICHARD BARTHELMESS SALES COMPANY, Jacksonville, Fla.; T. C. FRENCH COMPANY, Akron, Ohio; A. G. ALLEN COMPANY, Indianapolis, Ind.; JEFF A. HEDDON COMPANY, Atlanta, Georgia.

GENERAL FILTERS INCORPORATED **GENERAL FUEL OIL FILTER** 12890 WESTWOOD AVE. DETROIT 23, MICHIGAN

CANADIAN FACTORY BRANCH: GENERAL FILTERS CANADA, 1227 ST. CLAIR • TORONTO, ONTARIO

THE *Richfield* FLAME CONTROL TURBULATOR HEAD delivers from 10 to 14%+ CO_2 by actual laboratory and field tests. This means 20% greater efficiency—more sales. FORWARD COUPON NOW!



The new, improved Richfield Flame Control oil burner with the patented Turbulator Head is in full production... ready for delivery to installing dealers everywhere. It's been MARKET-TESTED for efficient operation, fuel economy, full service-ability... and is priced right for a competitive market.

We need installing dealers in every part of the country; we are building a dealer organization on a new territorial basis; replies from large or small dealers are wanted.

RICHFIELD MANUFACTURING CORPORATION
21 West 19th Street, New York 11, N. Y.
Telephone CHelsea 3-1420

Richfield Mfg. Corp.
21 West 19th Street, New York 11
Gentlemen:
Please send us full details on your exclusive Richfield franchise.
Name_____
Address_____
City_____ State_____

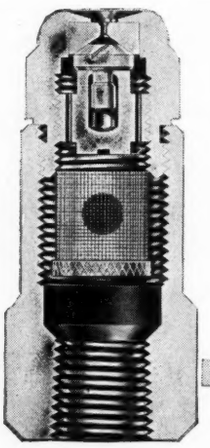
fuel oil & oil heat

Charles Bendix has joined the Automatic Burner Corp., Chicago, as assistant to President Joseph Hearst in sales and promotion. Mr. Bendix is one of the older old timers in the industry, having been a dealer, distributor and factory man for some of the better known oilburner manufacturers. He left Electrol early in the war to enter into business for himself, and is returning to the oilheating business after an absence of five years. He will work out of Chicago.

William H. Emory, assistant manager of American Radiator and Standard Sanitary's New York sales office, died on May 21 at his home in New York. He was 67 years old and had been affiliated with the company in various capacities for 42 years. He first joined American Radiator in 1905 in their Philadelphia branch and served as sales office manager in Milwaukee, Atlanta, Detroit, Brooklyn and New York. He is survived by two sons and a daughter.

Howard M. Dirks, effective May 1, was promoted to become vice president and personnel director, Carrier Corp., Syracuse, N. Y.

NOZZLE PRICES!



NO REDUCTIONS ARE IN SIGHT FOR THE *Immediate Future!*

Balloffet Design Nozzles by DELAVAN

There have been no price increases on Balloffet Design Oil Burner Nozzles in the past six years in spite of great increases in labor and material costs.

We have been able to maintain these low prices only as a result of volume production. And we are certain that any price reductions are impossible, within the predictable future.

You can order Delavan nozzles and accessories NOW, with full assurance that no price break is anticipated, or probable.

ORDER NOZZLES *Now!*

MEMBER OHI OIL HEAT INSTITUTE OF AMERICA

DELAVAN ENGINEERING CO.

Established 1937

DES MOINES 9, IOWA

Readers' Forum

AUTOMATIC HEAT INC.

Philadelphia

Editor:

In the 25 years next month that I have been enjoying (even in the day's of my good friend Leod Becker's editorship) every page of FUELOIL & OIL HEAT I have noted with interest from time to time the ingenious solution of problems to be found in the letters from readers.

I am particularly interested in the story of the use of a low water cut-off to avoid out-of-oil calls, explained in the June issue. Years ago under similar conditions I found a simpler and cheaper solution in telling my in-laws to go to a warmer place (on the theory that oilburners would not be needed).

It is not hard to realize how happy many of our customers wives would be to have a couple of cans of fueloil in the refrigerator and another in the bedroom cupboard.

Incidentally, I am wondering how the idea would work with the thousands of installations with "over the top" suctions. Coming as I do, from a long line of gentlemen brewers, directly related to gentlemen farmers (former lucrative) this solution immediately occurs to me:

Why not weld trunnions on the ends of the tank and mount it in bearings so that when the user expected a run out he could tip the tank over and make the low water cut-off work.

By the way, why doesn't someone tell him about the Dixon Gauge that stops the burner on any kind of a hookup? I've used several hundred and they are good.

LIONEL JACOBS.

D. D. Monroe's appointment as an assistant general sales manager at New York is one of a series of promotions announced by The Texas Co., New York 17, N. Y. Others revealed the appointment of *R. R. Kibbe* as manager of the northern territory; *S. C. Bartlett,* manager, central territory; *W. B. Hawke,* manager of the New York Div.; *L. M. Green,* assistant territorial manager in Chicago and *I. G. Morgan,* manager of the Dallas Div.

Amazing New Radiant Heating
RADIANT PANEL REPLACES BASEBOARD
. . . IS PRACTICALLY INVISIBLE
You will scarcely notice this Baseboard Radiant Panel, yet it's right in front of your eyes! It's American-Standard's latest development in home heating. Only 8" high, it fits snugly against the wall, looks exactly like the baseboard—and can be painted any color to match the wood trim.
Decorator's dream. Nothing to interfere with drapes or decorations. This Baseboard Radiant Panel gives you full use of every foot of wall and floor space. Permits complete freedom in furniture arrangement.
No cold spots. From floor to ceiling, the new Baseboard Radiant Panel provides sun-like warmth throughout the room.
Write for more information about this amazing new Baseboard Radiant Panel Heating. And also ask for our new Home Book. It illustrates and describes American-Standard Heating Equipment and Plumbing Fixtures. Sold through Wholesale Distributors to your Heating and Plumbing Contractor. Available on easy time payments for remodeling. American Radiator & Standard Sanitary Corporation, Dept. P77, Pittsburgh 30, Pa.
Look for this Mark of Merit
AMERICAN-Standard
HEATING PLUMBING
Serving the Nations' Health and Comfort
TO CONTRACTORS:
Complete details of this new Baseboard Radiant Panel are now available. Just write American Radiator & Standard Sanitary Corporation, P. O. Box 1226, Pittsburgh 30, Pa.

This advertisement in full color appears in leading national magazines read by millions, many of whom will eagerly accept American-Standard's new Baseboard Radiant Panel as the most modern advancement in residential heating.

LOOK FOR THE MARK OF MERIT—It identifies the world's largest line of Heating and Plumbing Products for every use . . . including Boilers, Warm Air Furnaces, Winter Air Conditioners, Water Heaters, for all fuels—Radiators, Convectors, Enclosures—Gas and Oil Burners—Heating Accessories—Bathtubs, Water Closets, Lavatories, Kitchen Sinks, Laundry Trays, Brass Trim—and specialized products for Hospitals, Hotels, Schools, Ships, and Railroads.

fueloil & oil heat

Sales Literature

BRIEF DESCRIPTIONS of catalogs and sales literature prepared and offered by manufacturers appear below. Those interested in securing copies of the booklets or additional information on products described, are urged to write direct to the manufacturers.

Standard Oil Co. (Indiana). A 20-page booklet, "Useful Operating Hints for oil-burning pot-type space heaters, water heaters, cooking ranges." Contains diagrams and explanations for correct installation and operating procedure. Designed for consumer.

Owens-Corning Fiberglas Corp., Toledo 1, Ohio. A catalog of Dustop air filter sizes for filter equipped warm air furnaces and air conditioning units. Tabulated by companies, all models using Dustop filters are listed, with the number and size of filters used.

Wheelco Instruments Co., Chicago, Ill. Condensed catalog, bulletin No. Z-6400, "Wheelco Electronic Controls." Contains listings, specifications on standard Wheelco industrial instruments.

MONARCH
BURNER ACCESSORIES

AIR CONES AND STABILIZERS
(ALL SIZES IN STOCK)

F-57 H-215

A new air cone-stabilizer combination is now available for 3⅞" I.D. air tube and several more sizes will be announced shortly.

Monarch combinations have been used as original equipment by burner manufacturers for many years and dealers have used thousands of them to make old burners more efficient. Eliminate guesswork—Use this tried and tested equipment and be sure of *results*.

Now available for 3½", 3⅞", 4", 4¼", 4¾", 6" and 8" I.D. air tubes.

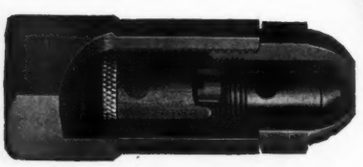
Atomizing Nozzles

Monarch Nozzles are preferred because:

1. Capacities and spray characteristics are uniform. Each nozzle is individually tested and checked for capacity against the flow of a calibrated master sample. Capacity tolerances are as low as plus or minus 2½%.
2. Standard nozzles will fire most gun type high pressure burners satisfactorily, but special series are also available for burners requiring specified spray characteristics.

Replacement Valves

Monarch piston type pressure regulating and cut-off valves are available in several models to suit most replacement needs. G-49 valves can be mounted in any position and piston will not jam from dirt. Contain no bellows or diaphragm to break or corrode.



Write for Catalog D

MONARCH MFG. WORKS, INC.
EAST WESTMORELAND AND SALMON STS.
PHILADELPHIA 34 PENNA.

General Electric Co., Air Conditioning Dept., Bloomfield, N. J. Bulletin SP-00-347, pictures, describes and lists specifications for oil and gasfired boiler-burner and furnace-burner units, room air conditioners, and commercial and industrial air conditioning equipment; SP-39-281 contains similar data on G-E automatic heating equipment only.

D'Elia Oil Burner Co., Bridgeport, Conn. Four-page folder, showing models FT and DXN gun type conversion oilburners, featuring the Flame Tuner.

Quiet Automatic Burner Corp., Newark 4, N. J. Folder on gun type conversion oilburner, with cut-a-way illustration showing nozzle and air delivery system.

Selectrol Eng. Co., Brooklyn, N. Y. Fire King gun type conversion oilburners and Selectrol boiler-burner units featured in folder, which shows unit ratings and specifications.

Reif-Rexoil, Inc., Buffalo, N. Y. Envelope stuffer on Leidig water pre-heater for furnace installations. Heater installed in smoke pipe uses waste stack heat.

United States Testing Co., Hoboken, N. J. Two booklets, one describing industrial testing for refrigeration field, the other illustrating facilities and services offered heating, ventilating and air conditioning fields.

American Hair & Felt Co., Chicago 54, Ill. Bulletin #300 on Ozite insulating felt, with pictures and descriptions of its applications.

Air Devices, Inc., New York 17, N. Y. Twelve-page booklet on Agitair industrial furnaces, capacities from 600,000 to 1,000,000 Btu's, and larger.

Gordon Heating Corp., Cranford, N. J. Offers a display card in five colors, featuring vapor equalizing valves and air eliminators. Size 14" x 20", can be furnished with easel.

Armstrong Cork Co., Lancaster, Pa. 8-page booklet, Armstrong Mineral Wool Board for insulating low temperature rooms. Discusses applications, explains by text and pictures how the board is to be applied and finished.

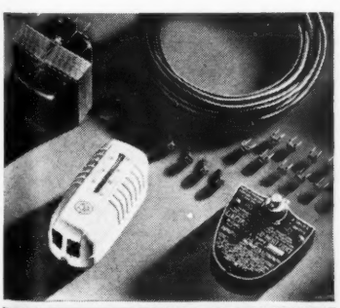
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. "There'll come a day" relates in humorous rhyme and cartoon drawings the difficulties the company encounters in securing raw materials, and how, in spite of these obstacles, the organization has grown and has produced a large volume of controls.

Add SUMMER SALES...

All Oil Heater Owners Welcome the Comfort and Savings Offered by

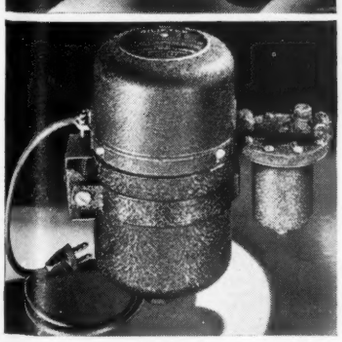
DEPENDABLE AUTOMATIC ACCESSORIES...

Here's a ready source of extra sales and profits — all the folks in your community who own Vaporizing Burner Oil Heaters! Show them how these A-P AUTOMATIC ACCESSORIES will pay for themselves in oil savings, greater convenience, steadier heating.



Thermostatic Heat Regulator Set Model 240-ED

Adds THERMOSTATIC Temperature Control convenience and economy to any heater using A-P Model 240-DR, UR, or YR Oil Controls—made since 1939. Easily installed set includes Electric Conversion Top, Thermostat, Transformer and accessories.



OILIFTER — for Automatic Fuel Handling

Avoiding fuel handling and messy "Bucketing" of fuel oil in the home. The A-P OILIFTER, draws oil from remote bulk storage tank as far away as 100 feet or three stories. It can be mounted on ANY FUEL OIL BURNING APPLIANCE. It's a great convenience in any oil-heated home.

Write for details, prices and sales helps on these fast-turnover A-P AUTOMATIC ACCESSORIES

BE SURE your new heater lines use A-P DEPENDABLE OIL CONTROLS — for faster sales, greater customer satisfaction.

AUTOMATIC PRODUCTS COMPANY

2458 NORTH THIRTY-SECOND STREET, MILWAUKEE 10, WISCONSIN

DEPENDABLE *Oil Controls*

DESIGNED TO ELIMINATE SERVICING

fueloil & oil heat

The CHIEF *Oil Fired* WATER HEATER

The silent-operating "Chief" is built for years of trouble-free operation . . . No moving parts to wear out . . . Completely safe, approved by Underwriters Laboratories, Inc. Economical too—its thrifty performance will permit additional household savings . . . Uses No. 1 fuel oil. The "Chief" is attractively finished in a high lustre white, designed to beautify any home.

Naturally, you will want to know more about the "Chief"—drop us a card or letter TODAY for full particulars. Descriptive literature upon request.

MT. PLEASANT HEATER CORP.

710 S. OAK ST. • MT. PLEASANT, MICH.

Reader's Problems

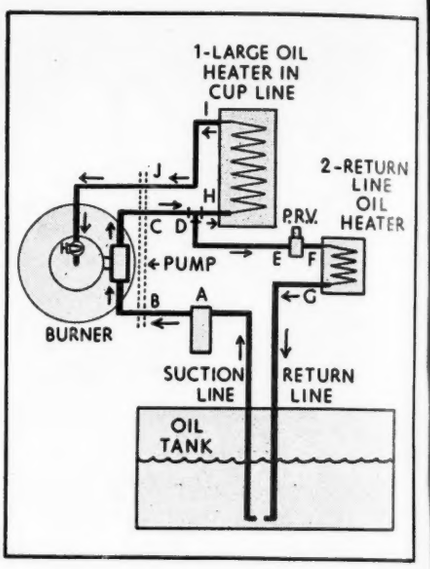
Q. Thank you and the author of "New Technique for Heavy Oil," the article in your March 1947 issue. His discussion of his new idea is appreciated.

Experts on largest automatic burners have widely different ideas on the best temperature of the oil going to the cup. First, not by accident or shoddying of jobs but by intention, certain dealers arrive at 120° as the maximum temperature of the oil going to the cup, explaining that their burners give unsurpassable results without higher oil temperatures. Second, many dealers, like the author of your article, find about 140° the most suitable temperature of the oil going to the cup. Third, still other dealers aim for cup line temperatures as high as 160° or even 180° because this (a) thins the oil greatly and gives finer atomization, and (b) arrives at the point on a temperature-viscosity curve where a 5° change in oil temperature causes a minimum and neglilgible change in viscosity.

I specify and see many makes of burners, and I believe this: As few dealers can do the research and development work done by largest manufacturers of burners, a dealer ordinarily should accept the burner manufacturer's ideas regarding the best cup line temperature for a burner.

If the oil heater control arrangement shown in your article is to be used by a dealer who wants the cup line oil to be 160° or 180° (as at least one important burner manufacturer recommends), then how can oil hotter than 140° be kept from returning to the oil storage tank? Certain safety authorities believe oil hotter than 140° should not be returned to a tank.

G.H.C., *New York*



A. The accompanying diagram shows one way to use the oil heater control arrangement described in the article while obtaining 160° to 180° cup line temperatures and without returning to the tank oil hotter than 140°.

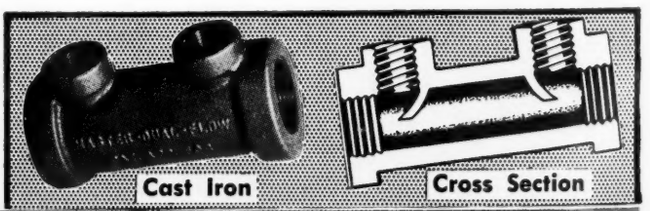
The path of the suction line oil is A-B. From C, the pump output connection, all the oil handled by the pump goes to D, a tee. Only the oil which will go to the cup flows to H, the large oil heater which

IT'S FOOLPROOF!

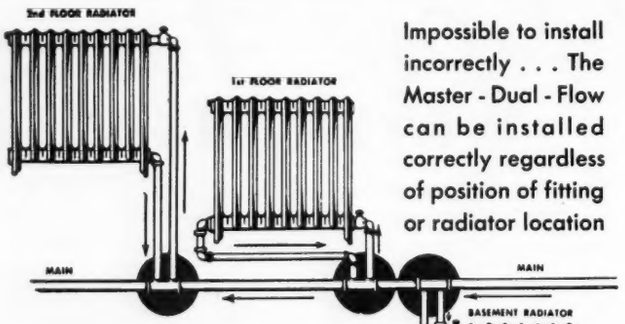
(Pat Applied For)

Master-Dual-Flow

FOOLPROOF FITTING DESIGNED FOR ONE PIPE FORCED HOT WATER SYSTEMS



SAVES MATERIAL, LABOR, FUEL AND TIME



Impossible to install incorrectly . . . The Master - Dual - Flow can be installed correctly regardless of position of fitting or radiator location

CHECK THESE 6 IMPORTANT FACTS

1. Insures more efficient and economical heating through quicker circulation and better flow. Saves fuel.
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3. Same Master-Dual-Flow fitting is used *whether radiator is above or below the main.*
4. Simple in construction — a cinch to install. *Foolproof installation guaranteed!*
5. Available in Brass (sweat fitting) or cast iron.
6. Distributed through the Wholesale Trade.

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Master-Dual-Flow is made in the following sizes:

1" x ½" Bronze for copper tube installations
I.P. size 1" x ½" cast iron
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I.P. size 1¼" x ¾" cast iron

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The New Norman Conversion Oil Burner features not one, but two outstanding improvements in oil heating:

First, **Norman vaporizes liquid oil faster and more completely to produce a cleaner, hotter gas flame eliminating the cause of soot and carbon.**

Second, this flame is broken up into a series of shorter, wider, swirling flames and the heat distribution concentrated directly to the sides of the combustion chamber.

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***Oil completely vaporized to produce a cleaner, hotter flame**

These sensational improvements in oil heating mean more prospects and more profits for you. Norman can be easily installed in most furnaces and boilers. Because of the shorter, swirling flame, it offers many advantages over the conventional shoestring flame for boiler conversions.

The burner is fully automatic, adjustable up to a maximum capacity of 1 gallon per hour. A two-speed low wattage blower assures positive combustion on high or low fire. Controls are housed in easily removable cover. Telescopic air duct, oil feed line with interchangeable nipples, and adjustable front and rear legs reduce installation time and cost.

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is controlled in the manner described in the article. Heated to 160° or 180°, the oil comes from the heater at I, then flows through line J to the cup. The two dotted lines indicate burner hinge.

A pressure regulator valve in the return line is marked P. R. V., while F and G are the oil connections of a relatively small oil heater, connected to the boiler in the usual manner (not controlled closely) and used to heat the oil returning to the tank to about 110° to 140°, depending on its capacity and as the planning engineer desires.

The principle of the layout is to split the oil after it leaves the pump. The oil that will go to the cup passes through a large oil heater which is closely controlled, while the oil that will be returned to the tank goes through a small oil heater which is not closely controlled.

We agree that usually it is best by far for a dealer to follow the recommendations of a reputable burner manufacturer when he plans his burner installations.

* * *

Q. I placed slots in the firebox floor for auxiliary air to permit a pressure burner rated about 4.0 gph to give the 7.0 gph flame needed on the job, but now can't use a 7.0 gph nozzle because the fuel unit does not seem able to give that much oil. Is there an easy answer?

D.N., *Lawrence, Kan.*

A. The best answer lies in installing a larger pressure burner which needs no auxiliary air to fire 7.0 gph. However, you probably can install a higher-capacity fuel unit on the burner. The chances are very slim that its larger pump would overload the burner motor.

* * *

Q. A vacuum gauge shows 5" when it should read zero. Does this prove there is 20" vacuum when the gauge reads 25"?

E.S.S., *Chicago*

A. No. A gauge needle which is ahead or behind a certain amount at one part of the scale often gives a different error at other points on the scale, particularly if the gauge is worn or has been damaged. Use a new, good vacuum gauge to obtain good readings.

* * *

Q. With reference to an article in FUELOIL & OIL HEAT *magazine, March 1947, page 63, we are very much interested in the radio filter to be put on transformers to end radio interference.*

Would you please inform us the name of the manufacturer of the above radio filter.

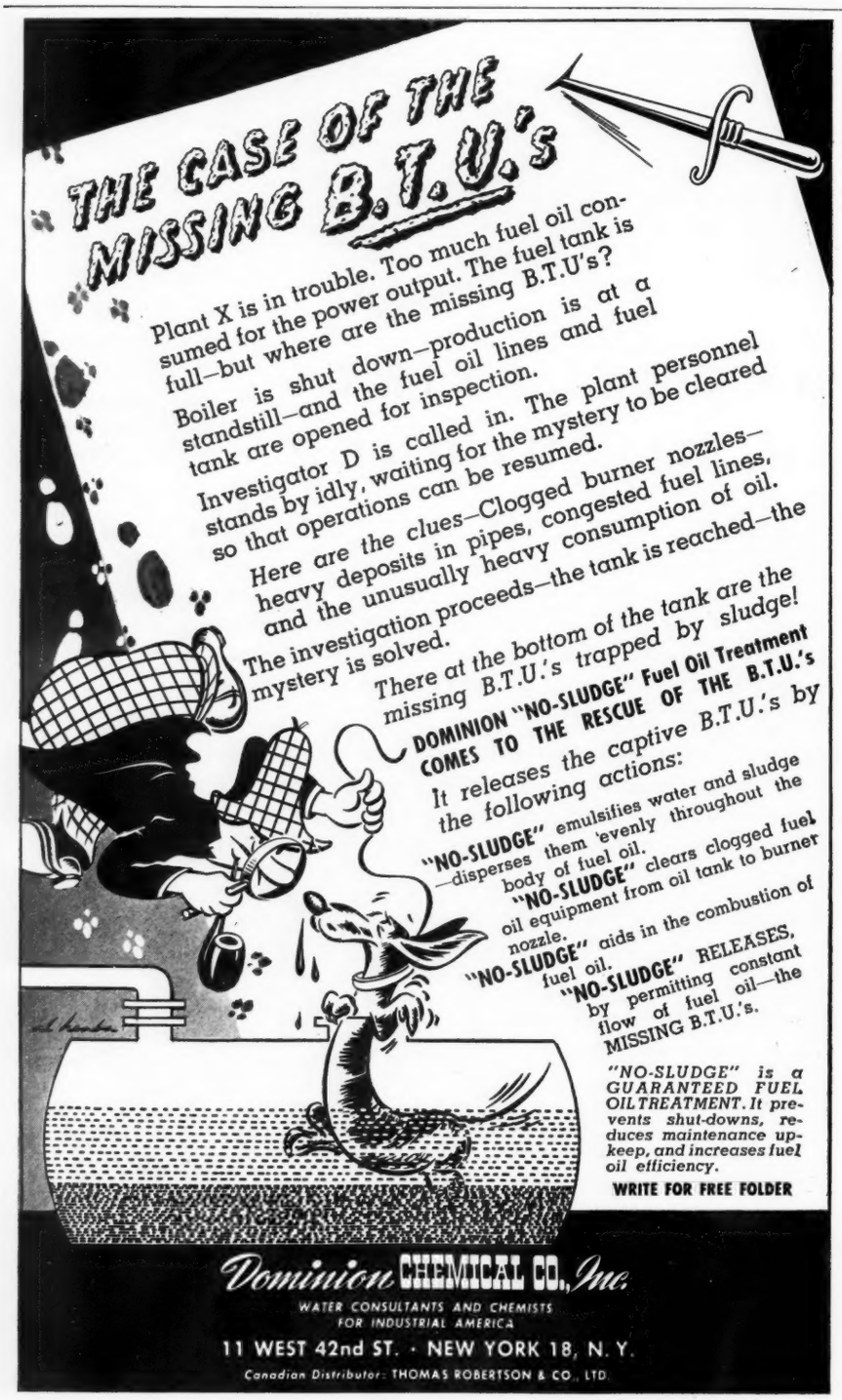
B.H.G., *Montreal, Canada*

A. We have at hand the name and address of only one manufacturer which has made a specialty of devices for ending the radio interference given by certain oil burner transformers: Sprague Products Company, North Adams, Mass. We believe this company will send you an instructive booklet on this subject if you will write for this.

We are requesting the names and addresses of other companies which manufacture radio traps and similar devices for ending radio interference, hoping to obtain additional information from the readers who see this question and answer published. In an early issue, we will publish in this department any manufacturers' names and addresses which we receive.

* * *

Q. If this makes me appear overly critical, I still must ask the following questions which are the natural result of any


THE CASE OF THE MISSING B.T.U.'s
Plant X is in trouble. Too much fuel oil consumed for the power output. The fuel tank is full—but where are the missing B.T.U's?
Boiler is shut down—production is at a standstill—and the fuel oil lines and fuel tank are opened for inspection.
Investigator D is called in. The plant personnel stands by idly, waiting for the mystery to be cleared so that operations can be resumed.
Here are the clues—Clogged burner nozzles—heavy deposits in pipes, congested fuel lines, and the unusually heavy consumption of oil.
The investigation proceeds—the tank is reached—the mystery is solved.
There at the bottom of the tank are the missing B.T.U.'s trapped by sludge!
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It releases the captive B.T.U.'s by the following actions:
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"NO-SLUDGE" aids in the combustion of fuel oil.
"NO-SLUDGE" RELEASES, by permitting constant flow of fuel oil—the MISSING B.T.U.'s.
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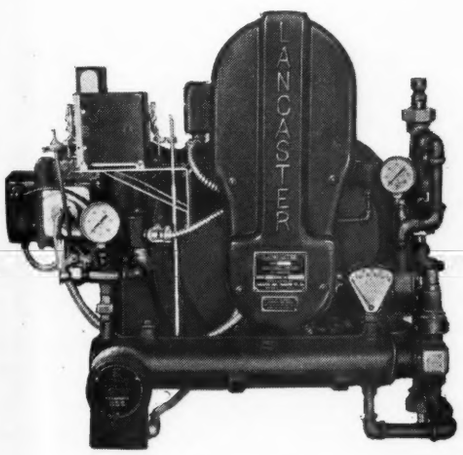

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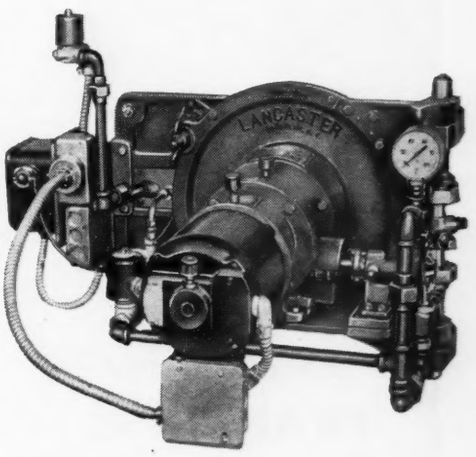

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fuel oil & oil heat

engineer studying your illustration of a register temperature recorder and a chart of an on-off recorder on page 62 of the April issue of your magazine.

1. How is it that the recorded data on the two recorder charts agree so poorly when the two charts were made for the same period according to the explanation below the photograph?

2. As this is very clearly a baseboard supply register, can it give good results in terms of the high-plane performance discussed in the article, particularly with design air temperature as high as 175° as is suggested in the article? Or do you overheat the ankles or the chair seats of occupants near the register?

T.K.C., *Washington, D. C.*

A. In answer to your good questions:

1. Made at the same time, the two charts have pen recordings which do not jibe closely because (a) this is a three-zone installation and during the test a bonnet control started and stopped the burner while mixing dampers controlled by a pneumatic room thermostat controlled the room temperature of the zone; and (b) an eight-hour recorder was being used for the register air temperature, while a 24-hour recorder was used to get the on-off record of the oilburner.

2. This baseboard supply register is part of a system designed for 175° air at the registers in zero weather. Located in the front hall near an outside door, it is intended to offset the effects of air leakage around the door, and opening of the door. The door now is very leaky, as the job actually has worked out, and so far the results of using this baseboard register at this location are very satisfactory. The register air velocity is very low. People passing the register to enter the house do not notice the warm air from the register particularly, but do find the house warm immediately on entering it. However, this is the only baseboard register in this system. All the other supply registers on the first floor of this house are floor registers, of the pattern shown in Diag. 2 in the same article, and all the registers on the second floor are ceiling-located for special reasons. The performance of the entire system is being studied closely with the help of several recorders, and the resultant data may be published at some future date.

* * *

Q. Exactly how do you explain the trouble, (and I have it too) which causes the shut-off valve of a pressure burner to close while the burner is running? I refer to problem of T.E.S., page 120, the March copy of FUELOIL & OIL HEAT.

S.W.P., *Milwaukee*

A. In the accompanying schematic diagram of a fuel unit arranged for two-pipe operation, a by-pass is shown around the pressure regulating port of the piston-type pressure regulator and shut-off valve. A slot or small port may be used in a fuel unit to provide this by-pass, or in effect the pressure regulating parts of the automatic valve may not close dead-tight. Leakage past the piston may give a by-pass effect. This effect is desirable; it accomplishes certain objectives.

If under any conditions the by-pass permits excessive flow, the pump pressure drops. First, the port which regulates the pressure is closed by the downward movement of the piston. Next, the needle valve in the nozzle line (that is, the shut-off valve) closes, dropping the oil pressure on the nozzle. If the by-pass were large enough, of course, all the oil being

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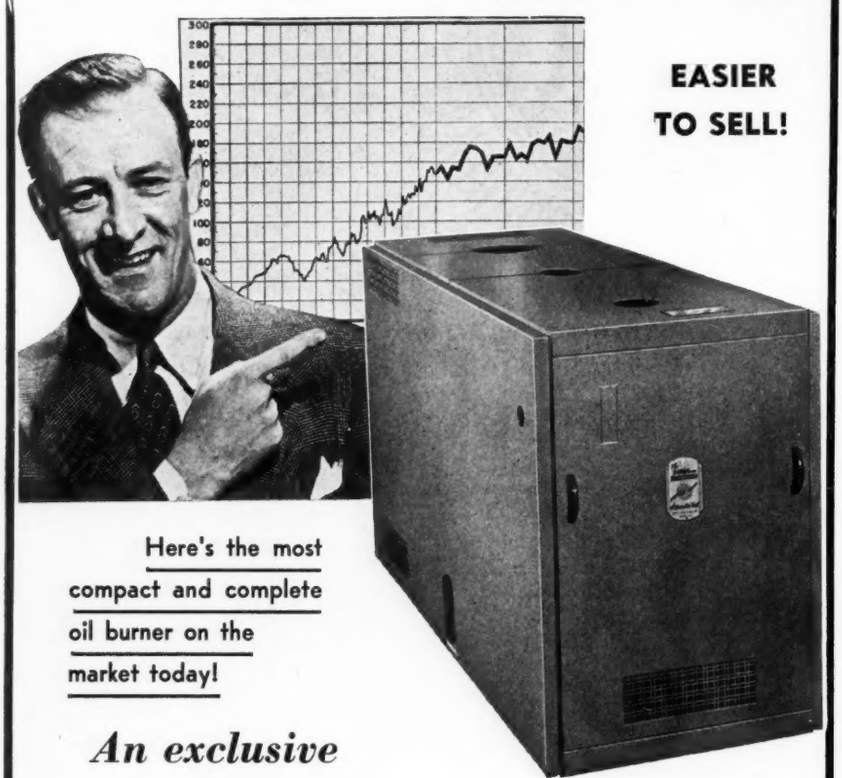

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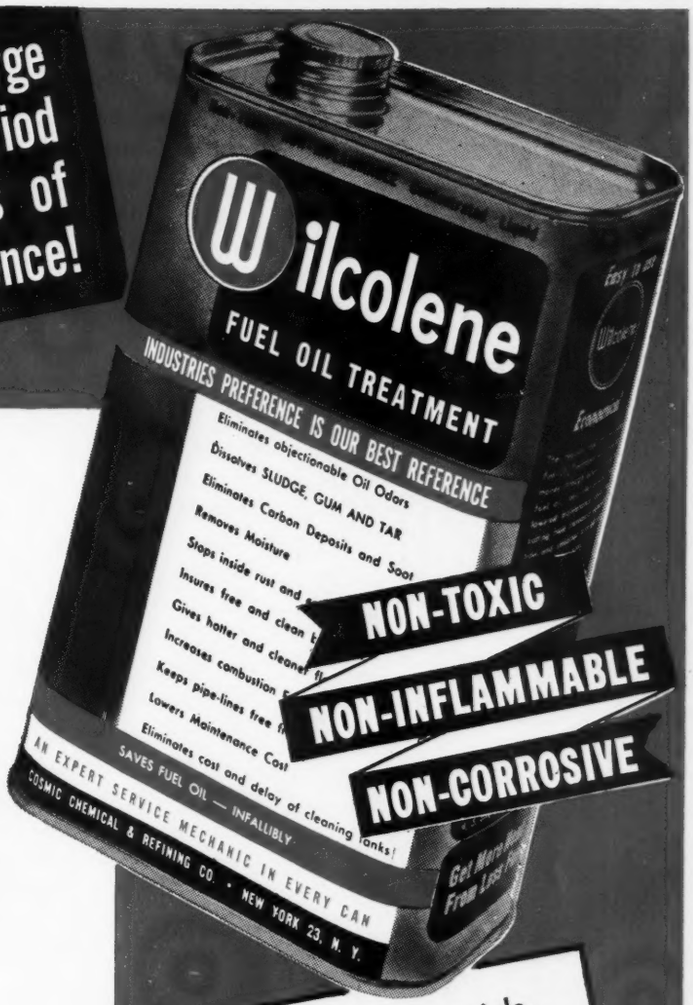
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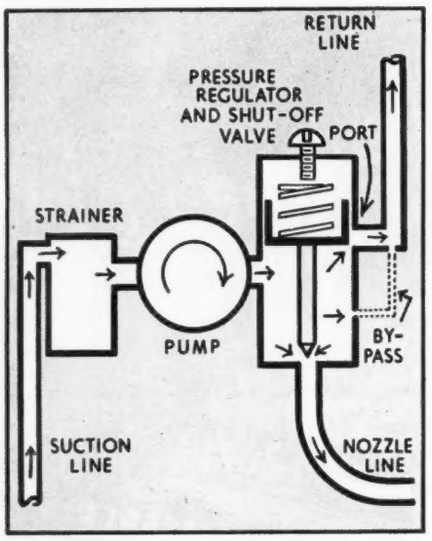
pumped could pass through it without any oil coming from the nozzle. The common causes for closing of a shut-off valve with



a burner in operation were given in the answer to the problem you mention. Of course and in addition, if air enters the pump because of a bad leak in the suction line, the pump pressure tends to drop and the shut-off valve may close.

* * *

Q. *Please answer these questions about vent valves for oilfired one-pipe steam plants:*

1. In the case of a zoned system which has motor-driven steam valves, can vacuum valves on the radiators pull a vacuum on the return lines to the boiler and prevent the condensation from returning?

2. Do vacuum valves save more oil by developing 20″ vacuum than 10″?

3. Do vacuum valves accomplish anything in the way of oil savings in a system so leaky no vacuum is developed? After I fix up his system, one of my customers opens and closes the radiator turn-off valves so often that they leak and no vacuum is developed.

E.S.S., *Chicago*

A. As we give the following answers to your questions, we invite comments from readers who are enthusiasts for vacuum-type one-pipe steam plants.

1. Using vacuum valves, there would be much greater tendency for this to happen than with vent valves not of the vacuum type, but many well-designed systems of this type operate satisfactorily even if a slight vacuum is developed in the radiators after a valve shuts off the steam to a zone. After all, even with non-vacuum valves, a slight vacuum may develop following the closing of the zone valve with the radiators full of steam and the vent valves therefore closed.

2. With a typical summer-winter hot water layout which has a boiler temperature control set at or above 160° and wired in parallel with the room thermostat, probably no more oil would be saved by developing a 20″ vacuum than by developing a 10″ vacuum. Reducing the boiler temperature considerably by developing the high vacuum would tend to cause the boiler temperature control to start the burner. Do not aim for a very high vacuum for an installation which has a tankless water heater. In the case of a boiler which serves for heating only, experts have different opinions regarding how much extra oil would be saved by developing a 20″ vacuum instead of a 10″ vacuum. Some declare that a small amount of oil very definitely would be saved, while others indicate the oil savings would be infinitesimal or zero. In other words, if a system develops 10″ maximum vacuum, certain experts say it is worthwhile to improve it so that it can develop

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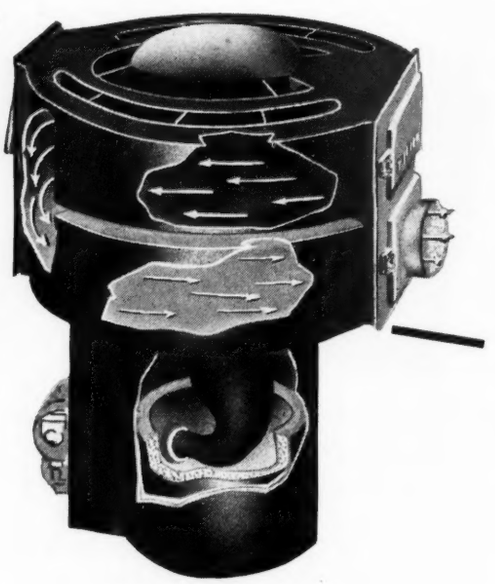

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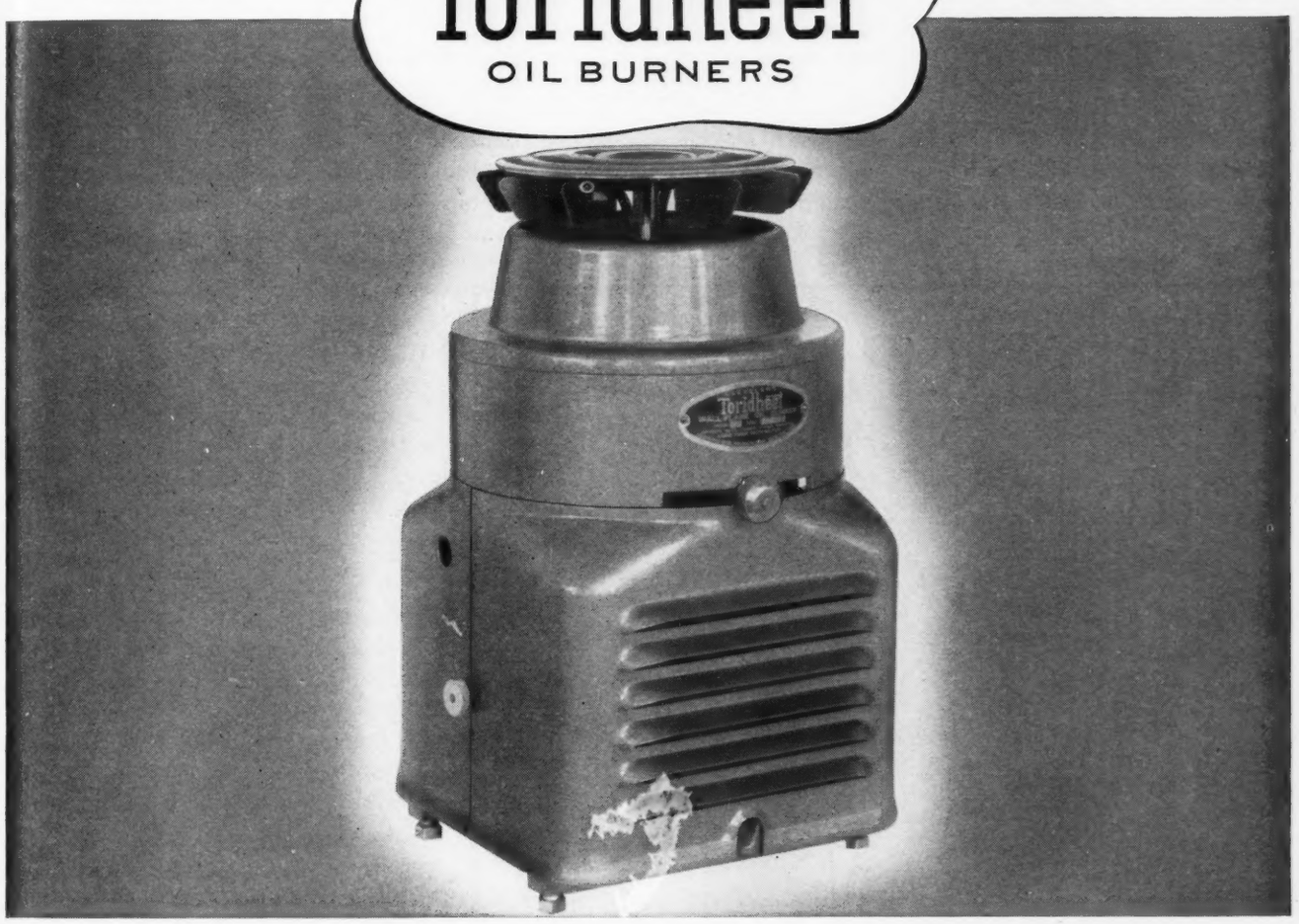

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2. **Bearing always completely immersed in oil**—even during a burner shut-down. This assures instant start after long idleness. And when burner is running, constant re-circulation of fresh oil to ample bearing surfaces guarantees cool, smooth running, dependable motor performance.
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20", while others say this would be foolish.

3. No, vacuum valves do not save oil in a system that develops no vacuum. However, if his radiator shut-off valves are in good condition and are packed properly, turning them on and off should not cause them to leak greatly at the bonnets within a year or so after you made them tight.

* * *

Q. A certain customer is my biggest headache because every time I deliver oil the tank gauge on his inside tank seems to indicate I have shorted him. I am wondering how other fuel oil dealers handle such a complaint.

O.T.W., *Brooklyn, N. Y.*

A. One method of proving to the customer he is getting full measure when his tank gauge indicates otherwise is to have him watch the meter on your truck while you make an oil delivery, and also check the readings given by his gauge. If he has a tank gauge which is of poor design, or which matches the tank dimensions poorly, or which is defective or in bad condition, you might sell him a better gauge. Explain, however, that many tank gauges are highly inaccurate compared to the meters used on fuel oil trucks.

* * *

Q. I hear that steel heating boilers have been damaged by the poor water in certain areas. Outline the best way to avoid this for the boilers I install.

S.J.M., *Brooklyn, N. Y.*

A. Take up the matter with the manufacturer of the boilers you install. Probably the manufacturer is familiar with the difficulty in the area which interests you, and can outline effective methods for treating the boiler water after the boiler is installed.

Or, obtain information and instructions from one of the reputable companies which offer chemicals for treating boiler water.

* * *

Q. How low can the water get in a steam boiler without risk of damage?

F.K., *White Plains, N. Y.*

A. With the water glass installed properly on the boiler, there should be no risk of damage to the boiler as long as there is definitely water, say one-half inch or more, visible in the gauge glass.

* * *

Q. How fast should I run the impeller of the hot water circulator in an ordinary six-room house heated by about 2,400 gallons of oil a winter? Motor is one-sixth horsepower. I want to check on the speed to find out if it is correct.

T.E.S., *Des Moines, Iowa*

A. We gather you are asking about a belt-driven circulator, and are considering switching to different size pulleys. Unless you first take up the matter with the manufacturer of the circulator, do not run the impeller at higher speed than is standard. You may overload the motor or cause other troubles. Slowing down the impeller somewhat is a safer thing to do. Offhand, however, it seems you will gain little from this in any event, and that it would entail considerable effort to make certain that the heating is as satisfactory with the circulator running slower.

If you want to make certain the impeller is running at the speed intended by the manufacturer, write to the manufacturer for details, or inspect a new circulator of the same make and model and check on the motor speed and pulley diameters to make certain they are the same as those of the circulator you ask about.

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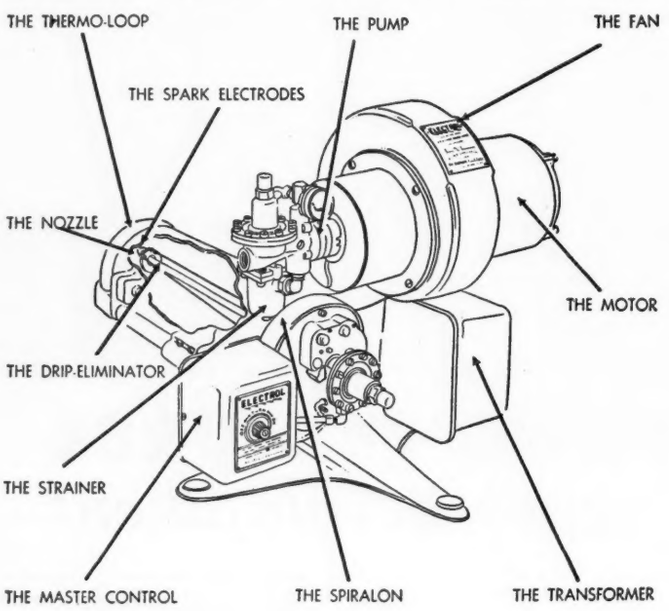

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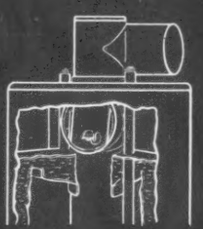

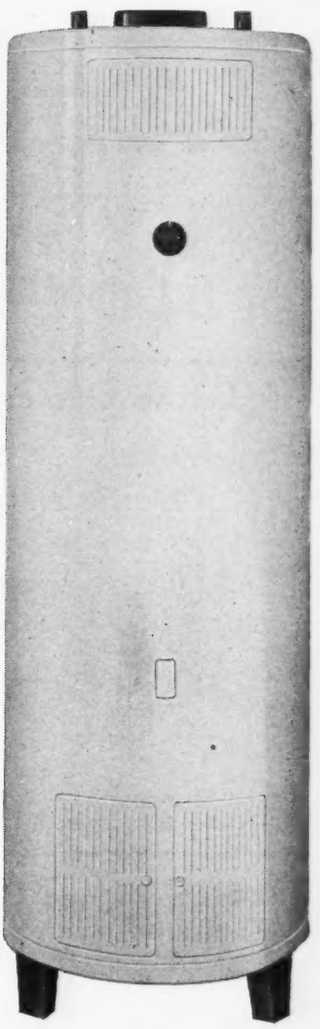

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Optimism on Supply

(*Continued from page 65*)

may forget to keep our customers informed about it.

I would guess, for example, that very few Americans know right now what has already been achieved. How many of our fellow citizens know that we are today producing more crude oil than we ever produced before—even in the war years? How many know that we are right now delivering oil products to our customers here in the United States at a greater rate than the consumption rate of the whole world, outside of Russia, before the war? How many know that during 1947 alone American oil companies are investing nearly two billion dollars to make sure that our customers can count on us over the years ahead?

Perhaps that is just another job that we must add to the many we have already taken on. The American citizen is known for his fairness. He will not criticize us for putting him to temporary inconveniences if he understands the size of the job we are tackling for him. It is not enough to serve the public interest. People want to know about it. They like to look over our shoulders and see how we are doing.

Lastly, I think the *job will be done.*

The interests of our customers will be served to the very best of our ability. And our ability is not inconsiderable. It is the ability of men of resolution and determination. It is the ability of free men operating in a competitive market, who have faced great problems in the past and overcome them.

In concluding, may I urge that all of us, in this time of great demand, bear in mind our long-term view of the industry. As I said to a group of producers in Bradford just a few days ago:

> This is a time for self-discipline, for business statesmanship and for driving forward on another gigantic job the American public expects us to do.
>
> This is a time for investment in the future. We have an obligation to help stabilize an economy of which we are an important part. Our policies should be based not on short-term expediency but on the long-term interests of the industry as a whole.

◈

Merrill L. Richey has been named Coleman heating equipment service engineer for Shaw Distributing Co., Charlotte, N. C., wholesale distributors of home appliances in North and South Carolina. Continuing in its reorganization and expansion the company also has added Earl E. Funderburke to its sales organization. Both men have completed intensive factory courses in sales and service on Coleman products, and both are veterans of the late War with service in the Air Forces in the Pacific area.

R. H. Reeder, who has been associated with Duo-Therm Div., Motor Wheel Corp., Lansing, Mich., for the past ten years, was named sales manager for the division and assumed his new duties June 1. He formerly was eastern district manager and was given a leave of absence during the war to work with Radar Research and Development Laboratory, M.I.T.

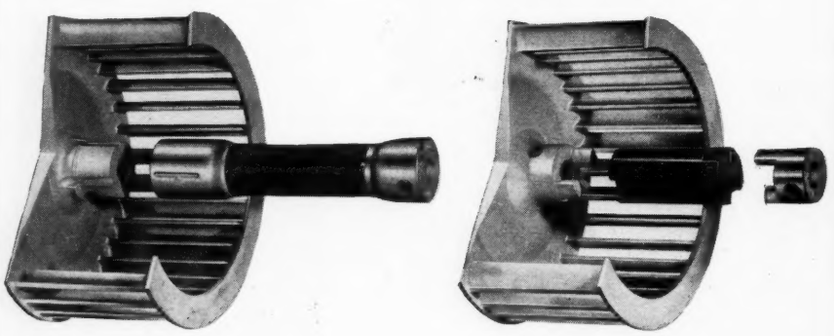
Ray J. Armbrush has been named sales representative of the Chicago office, Vapor Car Heating Co., Inc., and *C. E. Miller* is the newly named district engineer, Philadelphia office.

ADVANCE

"CASTALU"

BLOWER WHEELS

Cast in One Piece ● Without Rivets



HUB SPLINED FOR GUARDIAN COUPLING

TANGS FOR LOVEJOY COUPLING CAST ON HUB

● Strong and Durable ● Light Weight

● Maximum Efficiency

● Quiet Operation ● Low Power

● All Standard Sizes

● Natural Finish ● Non-Corrosive

Advance Aluminum Castings Corp.

CAST ALUMINUM PRODUCTS

2742 W. 36th Place **Chicago 32, Ill.**

HIGH PRESSURE *American Style....*

The American way is to make it better -- at less cost -- for more people!

And that's why the MOR-SUN pressed steel furnace is unique -- because it's mass precision produced!

Every part is die-pressed!

Why "die-pressed"?

Because the steel under the tremendous pressure of the scientifically-designed dies flows into the required shapes... with molecular changes taking place uniformly over the entire area -- completely eliminating the hazards of fracture common in the old-style "breaking" or bending method (Flanges, necks, openings, holes, corrugations and depressions are included in these stamping operations.)

And then electronically controlled automatic seam and spot welders produce the sub-assemblies and assemblies.

That's mass precision production -- high pressure -- American style.

That's why you -- and your customers -- get more with a MOR-SUN!

MOR-SUN
PRESSED STEEL FURNACES

"The Sun Never Sets with MOR-SUN!"

MORRISON STEEL PRODUCTS Inc.

BUFFALO 7, N. Y.

Manufacturers Activities

Petro Names Three Directors; Estimates Industry's Output

THREE NEW MEN were added June 6 to the Board of Directors of Petroleum Heat & Power Co., Stamford, Conn., raising to seven the number on the Board. Glenn Forgan, G. L. Rowsey and Harris A. Melasky are the new appointees, the latter two being president and vice president, respectively of Taylor Refining Co., Taylor, Texas, whose capital stock was acquired recently by Petro.

K. G. MacCart, president of Petro, recently estimated that sales of domestic oilburners in the United States will run more than 600,000 for each of the next ten years. More than 60% of these totals, he continues, will represent conversion installations, 35% will be in new homes and the remainder will replace existing burners. Output for 1947 alone, he estimates will be 700,000 units.

To help meet this accelerating demand, Petro has tripled its manufacturing capacity at Stamford since the end of the war and has increased its oil supply sources by acquiring Taylor Refining Co. The company also is constructing a large ocean terminal storage plant in New York to augment existing facilities.

Nola Oil Co. Purchases Schneidau Oil Burner Co.

THE OILBURNER BUSINESS, including all parts, patents and oil accounts of Schneidau Oil Burner, Inc., New Orleans 18, La., formerly operated by Gayle Schneidau, has been purchased by Nola Oil Co., New Orleans. Nola, headed by Frank B. Hayne and W. A. Wilkins, assumed control on July 1.

Mr. Schneidau, an oilburner pioneer since 1919, produced one of the industry's first vaporizing burners and changed to the present gun type model several years before the war. He suffered an automobile accident, which has necessitated several severe operations within the last few years, and is retiring from active business interests.

Silent Glow Extends Broadcasts; Closes for Two Week Vacation

ANOTHER RADIO STATION has been added to those already broadcasting the Silent Glow Glee Club, under the direction of Emile Cote. Since June 8, the program, sponsored by Silent Glow Oil Burner Corp., Hartford 6, Conn., has been heard at 12:15 P.M. on Sundays over Station WRC, Washington, D. C. This addition brings to eleven the number of stations carrying the program for a total of thirteen fifteen-minute broadcasts each week.

In accordance with established company policy, the office and factory of both Park St. and Windsor St. factories, Hartford, were closed from June 30 to July 14 to afford all employees a two week vacation.

Lau Blower Division Salesmen Attend Factory Sales Sessions

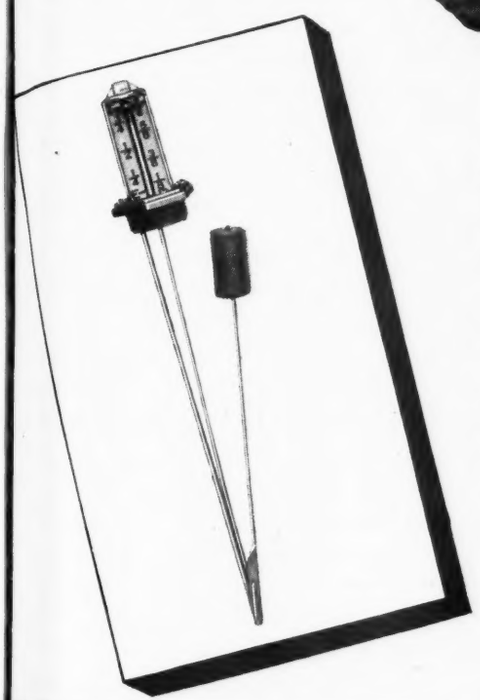
A THREE-DAY MEETING of Blower Division salesmen, Lau Blower Co., Dayton, Ohio, was held at the factory June 9 to 11, immediately following Warm Air Association meetings at Chicago. Panelair heating was discussed and the idea ad-

Clearview OIL TANK GAUGE

VISIBLE 40 FEET AWAY

WILL NOT LEAK

AVAILABLE IN 2 MODELS FOR FLAT & WALL TANKS



CLEARVIEW OIL GAUGE FEATURES: Clear Visibility . . . Dial Faces Any Desired Direction . . . Easily Calibrated . . . Simple to Install with or without Oil in Tank . . . Unbreakable TENITE Plastic Top . . . Pressure and Oil Tight . . . Direct Leverage—No Gears or Magnets . . . Corrosion-Resistant Float (treated Cork) . . . Sturdy Dependable Mechanism . . . Factory-Tested under 50 lbs. Air Pressure

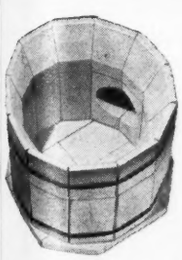
The operation of the CLEARVIEW OIL GAUGE is through direct leverage—no gears, magnets, bolts or nuts are used. All metal parts, submerged in oil, are cadmium-plated before assembly.

The CLEARVIEW OIL GAUGE is available in 2 Models as follows:
MODEL 26-27 . . . for 275 gallon flat tanks with vertical height of 26 and 27 inches.
MODEL 42-44 . . . for 275 gallon wall tanks with vertical height of 42 and 44 inches.

All sizes are supplied with 1½" or 2" pipe thread tank bushings. Shipping weight is approximately 1 lb.

All gauges are packed in cartons of 25 pieces.

— All These Products Are Ready For Immediate Delivery —



INSTANT-GLO
Custom Built
COMBUSTION CHAMBER

Made of insulating brick . . . provides a red-hot refractory surface throughout the full operating cycle of the burner, plus many other outstanding features.

The Apthorp TRUE ALIGNMENT OIL BURNER NOZZLE

Accurate in gallonage and spray angle . . . the patented "TRUE ALIGNMENT" feature guarantees perfect taper-to-taper fit within the nozzle. Every nozzle spray tested. Solid spray and hollow spray available. Nozzle data sheet supplied on request.

IDEAL NOZZLE EXTRACTOR

Easy to remove the nozzle from or install it in the nozzle adaptor without removing the gun assembly. Patented principle safeguarding against breaking porcelain and bending electrodes which commonly happens when ordinary wrenches are used.

Special socket for disassembling nozzle.

WRITE FOR COMPLETE INFORMATION

BOSTON MACHINE WORKS COMPANY

Oil Heating Supplies Division

BOSMACO

7-17 WILLOW ST., LYNN, MASS.

vanced that each salesman talk with his customers about arranging an installation in every community to better acquaint the public with its benefits.

Modernized winter conditioning was next on the agenda and a program of future promotion was outlined, concentrating on proper setting of blower speed. It was described how this can be accomplished by the home owner. Company advertising in newspapers and trade magazines is contemplated on this subject. The new Lau Weldwheel also was described as the most improved small wheel on the market at competitive prices, designed especially for oilburner and air conditioning applications. On the last day of the meeting, the salesmen toured the factory.

Harvey Opens Branch In Union City, N. J.

MATTY BERNARD, president, Sid Harvey of N. J., Inc., Newark, N. J., announces the opening of a branch in Union City, N. J., located at 1616 Bergenline Ave., and managed by Bud Hubbard, a returned veteran.

The Union City branch will carry the complete line of Sid Harvey service parts, including new and rebuilt pumps, valves, controls, motors and transformers and is intended to provide a more convenient pick-up point for customers in Bergen and Hudson counties than the Newark headquarters.

Comparative Fuel Costs Shown On Gulf Conversion Calculator

A CONVERSION CALCULATOR, prepared by Gulf Oil Corp. is a cardboard, pocket-size device, employing two sliding scales to compute comparative fuel costs. The calculator takes into consideration the efficiency of a coalfired plant, and the Btu per lb. of coal. By setting the grade of oil on the second scale and reading the figure that appears below the estimated efficiency of the oilfired system, the equivalent gallons of fueloil per ton of coal is obtained. It is then a simple matter to multiply by local costs to get a dollars and cents figure.

Two scales on the reverse of the calculator give average efficiency values for industrial and domestic installations coal and oilfired and the average Btu values for anthracite, bituminous, coke and six grades of fueloil.

Nat. Rad. Offers Fitters Guide and Heat Loss Sheet

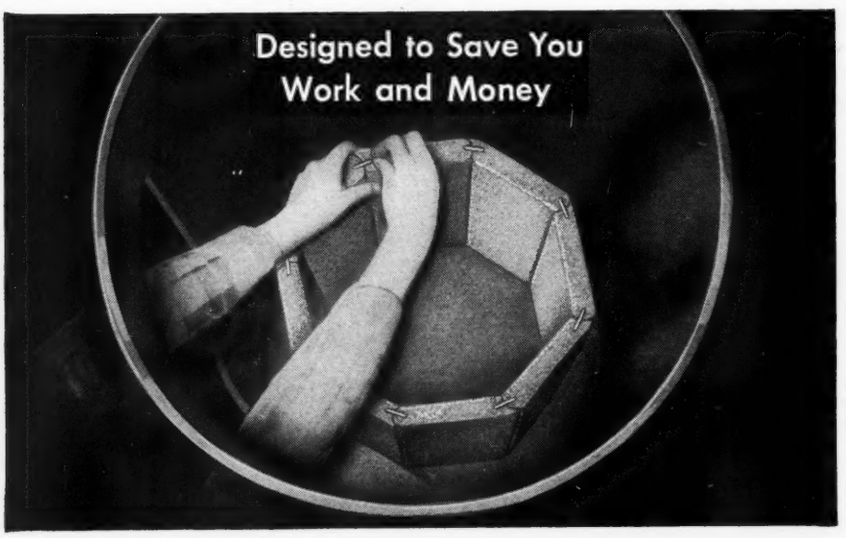
A FITTERS GUIDE and Heat Loss Calculation Sheet, developed by the Engineering Service Dept., National Radiator Co., Johnstown, Pa., provides a simple and accurate method of figuring radiation and selecting proper boiler size. It is based upon methods recommended by the Institute of Boiler and Radiator Manufacturers.

The Guide, which is printed on heavy paper stock and folded to pocket size, first explains how to use its contents and then furnishes examples to show how calculations are made. A Btu heat loss table contains data based on 0° F. outside and 70° F. inside temperatures.

National Radiator Co. is distributing copies without charge to dealers who request them.

Timken Concludes Series Of Dealer-Management Meetings

A TOTAL OF MORE THAN seven hundred and fifty dealers and their key executives



You'll marvel at the time, work and money saved by using R & I Combustion Chambers.

Everything needed to install a complete job is packed in a strong carton which can be carried and stacked by one man. There are no loose pieces to get mixed, lost or broken.

Without any cutting or fitting, R & I Combustion Chambers can be installed round, rectangular or pear shaped in a third the usual time. New sections can be easily and quickly installed if needed.

Imagine! All these advantages, and more, at a surprisingly low price.

They fit any burner from 1 to 1.65 gals. of oil per hour.

Your supply house has R & I Chambers. Write us for Bulletin OB-98.

REFRACTORY & INSULATION CORPORATION

120 WALL STREET **NEW YORK 5, N. Y.**

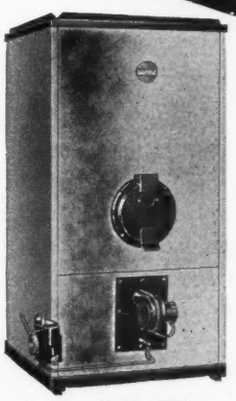
Chicago 4, Ill. Philadelphia 3, Pa. Newark 2, N. J.

R&I COMBUSTION CHAMBER

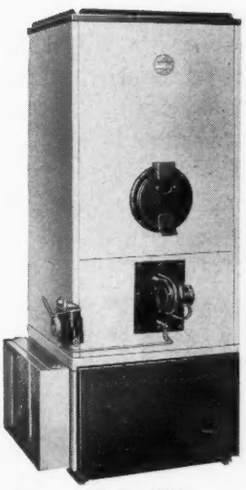
MONCRIEF *First Again*

IN *"Years Ahead"* ENGINEERING AND CONSTRUCTION FEATURES!

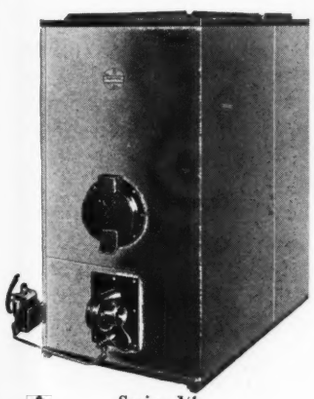
•Easy Installation •Easy Servicing



Series VW
Oil Fired, Steel
Gravity Unit



Series VU
Oil Fired, Steel Utility
Air Conditioning Unit



Series VL
Oil Fired, Steel
Air Conditioning Unit

Another Moncrief "Years Ahead" feature is the amazingly simple operation of removing the complete burner assembly without dismantling heating element or cabinet—a remarkable engineering achievement.

Moncrief's new line of vaporizing pot type units have tight-fitting cabinet floors that do away with basement platforms and grouting—the new method of automatic, submerged arc welding, that takes out the guess work—the heat absorbing radiation shield that does away with noisy inner liners—long-lived, stainless steel flame deflector—the burner with smokeless combustion.

These "stand-out" features make Moncrief a must on any heating job.

MONCRIEF VAPORIZING POT TYPE UNITS HAVE BEEN APPROVED BY UNDERWRITERS' LABORATORIES.

THE HENRY FURNACE COMPANY • *Medina, Ohio*

HEATING AND AIR CONDITIONING UNITS — MONCRIEF SINCE 1895 — FURNACE PIPE AND FITTINGS

Dealers *attending Timken Dealer-Management meeting in Philadelphia.*

attended three-day business sessions recently held at Chicago, Philadelphia and Boston by Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich. Purpose of the Dealer-Management meetings, according to T. A. Crawford, general manager of the Division, was to give dealers information on market trends in relation to their effect on the oilburner business, and current and future outlook for product deliveries. An important subject discussed at the sessions was the new methods used by the company in hiring and training sales and service personnel.

In addition to Mr. Crawford, R. M. Marberry, director of advertising, and W. J. Chappel, assistant sales manager, attended for the company. Regional sales managers Ralph Hooke, M. F. Robbins and F. M. Jordan served as chairmen in their respective territories.

The meeting in Boston was broadcast over Station WNAC, key station of the Yankee Network. The program consisted of a series of interviews with Timken representatives and guests attending the meetings, and a talk by Prof. Myles Mace, Harvard School of Business Administration in which he praised small business men operating their businesses at a profit.

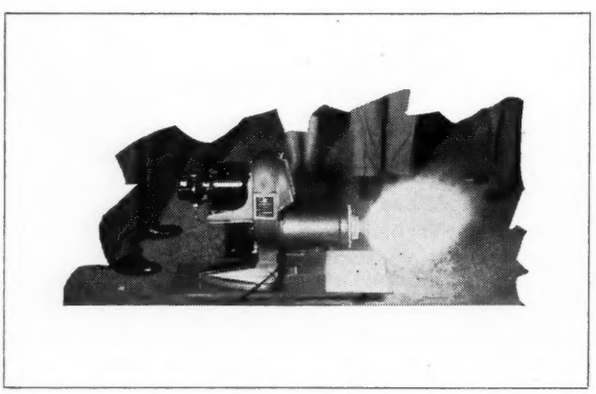
Debler Named Eastern Seaboard Eddington Specialty Jobbers

THE APPOINTMENT of William J. Debler & Sons as exclusive eastern seaboard jobber representatives has been announced by Eddington Metal Specialty Co., Eddington, Pa. The outlet, with offices at Philadelphia, Newark, N. J. and Brookline, Mass., will distribute Edco nozzles, adapters, strainers, pressure regulating valves, air cones and stabilizers. The firm already is distributing General fueloil filters.

Mueller Conference Acquaints Dealers with Oilfired Units

A SERIES OF CONFERENCES recently was held for dealers of Home Gas Industries, Chicago, at the plant of L. J. Mueller Furnace Co., Milwaukee, Wis. The conferences were conducted by Frank J. Nunlist, Jr., Mueller's chief engineer, the first

Let's look at OIL BURNERS



Beckett Commodore burns outdoors without aid of fire box—ignition cut off—retains normal flame.

THE COMMODORE HAS—

- Progressive air rotation—positive air delivery makes cleaner, quieter, hotter fires.
- More dependable ignition
- Lower nozzle temperature
- Automatic damper control—saves fuel
- High tension cable eliminated
- All rotating parts dynamically balanced
- Motor and pump shafts accurately aligned
- Four main assemblies—accessible, special tools not needed
- Easy installation and adjustments—tamper proof
- Finger-tip air control—tamper proof

Line them up, compare performance, design and engineering. You'll find, as hundreds of dealers have, that the Beckett Commodore is tops. Outstanding in performance, they save fuel every minute of the heating season—starting, running and stopping.

Design and engineering are tops too; for built-in ruggedness and simple construction, the features that make them ideal from the users standpoint also make them easier to install, better to service.

Yes, you'll be able to help many home and building owners to clean, cosy comfort all winter long. You'll also build your reputation, for although demands still exceed deliveries, every Beckett burner is a good burner. Each one is complete, and fire tested. That makes good dealer business.

For homes — churches — schools — apartments — business buildings — special applications

R. W. BECKETT CORPORATION
(FORMERLY R. W. BECKETT ENGINEERING CO.)
ELYRIA, OHIO

COMMODORE Oil Burners

ACTUAL SIZE

BUILT TO STAND EVERY TEST

BEAD CHAIN CONNECTION FOR GREATER STRENGTH 14 BEADS—EACH A POSITIVE SWIVEL

LISTED AS APPROVED BY UNDERWRITERS LABORATORIES FOR YOUR PROTECTION

You save money—give greater customer satisfaction—when you install *Galongage.* It comes ready to use, saves you costly assembly time. It's easy to install, needs only 4-inch clearance above tank. *Galongage* is accurate, reliable, easy to read—has red warning numerals below 50 gallons. It's no wonder that for eye-appeal, for economy, for all around long-lasting quality, dealers and customers prefer *Galongage*—the gauge of distinction.

The *Galongage* that measures in 10-gallon spacings is calibrated for each standard size 275- and 220-gallon tank with depths of 44″, 42″, 27″ and 26″ with either 1½″ or 2″ tank openings. The *Galongage* also comes calibrated in inches for off-size tanks not exceeding 60″ in depth. *When ordering, be sure to specify depth of tank, size of opening, and calibration desired.*

Write today for our price list. Immediate delivery.

THE *Galongage*

A PRODUCT OF APPLIED MECHANICS COMPANY, 167 OLIVER STREET, BOSTON, MASS.

CANADIAN REPRESENTATIVES: *Railway & Engineering Specialties Ltd., 417 St. Peter Street, Montreal*

fueloil & oil heat

of which discussed Climatrol types 201 and 202, oilfired gravity furnace and winter air conditioning units. Otto J. Ress, research director, led the discussion on the units' design features.

The conferees also witnessed firing and testing procedures in the research laboratory and observed fabrication of equipment during a tour of the factory.

Century Engineering Names Nine Sales Representatives

APPOINTMENT of nine sales representatives in various territories has been announced by Century Eng. Corp., Cedar Rapids, Ia. Some of the men have been associated previously with Century, while others are recent additions to the staff.

Headquarters of the representatives and territories they will service are as follows: Chicago, Ray F. Considine, covering Wisconsin and Illinois; Brookline, Mass., Noel M. Edwards, covering New England States; Saginaw, Mich., W. E. Haynes, covering Michigan and Indiana; Baltimore, Lowell Madden, covering southeastern territory; Freeport, Ill., Asa H. Mellott, installation and service sales engineer; Columbus, Ohio Manufacturers Sales, Inc., covering state of Ohio; Seattle, Samuel Spilk, covering northwestern states; Cedar Rapids, Ia., H. J. Stites, covering Iowa, Missouri, Kansas and Nebraska; Mt. Vernon, N. Y., Paul Stoll, covering New York, New Jersey and eastern Pennsylvania.

Beckett Changes From Partnership to Corporation

FORMAL ANNOUNCEMENT has been made by R. W. Beckett, president, R. W. Beckett Corp., Elyria, Ohio of the change of status in the business from a partnership to a corporate basis. The company mailed notification to that effect to all its dealers, jobbers and suppliers, about the middle of June.

The corporation manufactures Commodore gun type oilburners and formerly was known as R. W. Beckett Eng. Co.

Name Three Representatives For Weather Man Controls

AUTOMATIC DEVICES CO., Chicago, Ill., manufacturers of Weather Man outdoor type building temperature controls, announces the appointment of three new representatives. Thomas F. Burke Co., Washington 2, D. C., will cover Maryland, northern Virginia and District of Columbia; W. A. Hammond, Inc., Buffalo 13, N. Y., is taking over northern and western New York and four counties in Pennsylvania and Edward E. Weingand, Forest Park, Ill., will represent the company in Wisconsin, Minnesota and the eastern halves of North and South Dakota.

Hasko Utilities Opens Long Island Branch

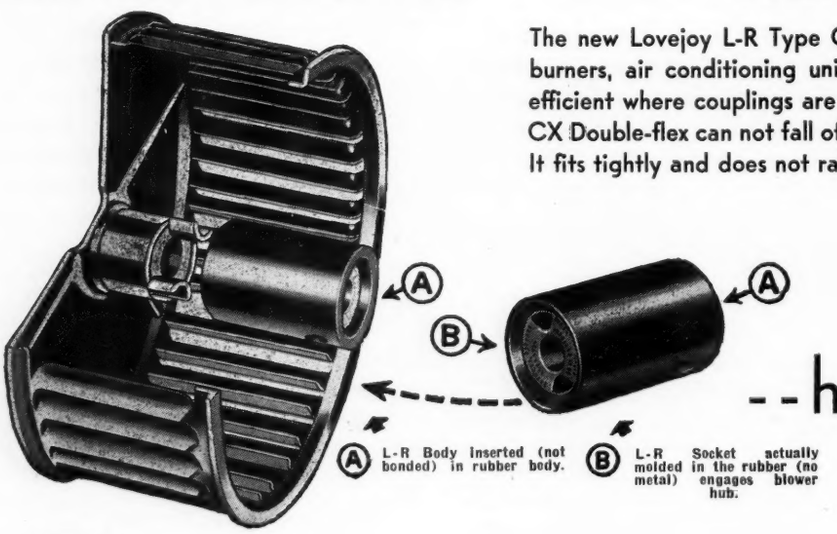
HASKO UTILITIES CO., New York 16, N. Y., wholesale distributors of heating equipment, announces the opening of a Long Island branch at 80 Main St., Mineola, N. Y. Calvin C. Kohart, who has been associated with the company for six years, is manager, assisted by Thomas McSweeney and Daniel Wolters. The branch will stock a complete line of oilburners, controls, boilers and accessory equipment.

In the New York office, Alfred S. Kohart has been put in charge of heavy oil-

LOVEJOY L-R
Type CX Double-flex
Flexible Coupling

— — here's what it is:

The new Lovejoy L-R Type CX Double-flex is a better coupling for oil burners, air conditioning units and other installations; but particularly efficient where couplings are located in the dark or close quarters. The CX Double-flex can not fall off when blower and pump units are serviced. It fits tightly and does not rattle.



A L-R Body inserted (not bonded) in rubber body. B L-R Socket actually molded in the rubber (no metal) engages blower hub.

--here's what it does:

Positive correction of misalignment, shock, surge, backlash, etc. is achieved with the Lovejoy L-R Type CX Double-flex flexible coupling. Oil heating and air conditioning engineers and servicemen say it is quickly assembled and easily installed.

Get all the details in Bulletin 520

OHI

LOVEJOY FLEXIBLE COUPLING CO.
5012 W. Lake Street • Chicago 44, Ill.

WHAT'S IN A NAME-plate? *PLENTY..*

This is the bare boiler without trim or insulation. The quickly attached jacket, now available, covers and protects everything including burner and all controls.

Here's a boiler name-plate that's as informative as a trip through the boiler plant. The four-leaf clover symbol with the "H" in the center is the familiar mark of the American Society of Mechanical Engineers. The Fitzgibbons steel boiler upon which it appears, in design, materials, and workmanship, exceeds the standards set by this engineering authority. That's something to know about a boiler.

Then take the "SBI" Symbol on the other corner. It means that the Boiler has been laboratory tested in accordance with the Steel Boiler Institute Code and its rating proven accurate. It eliminates wishful thinking, disappointment, and dissatisfaction in boiler performance. You *know* what that boiler will do.

The third symbol is the Fitzgibbons trade mark, (Reg. U. S. Pat. Off.) which for over sixty years has been regarded as a top-flight mark of steel boiler excellence.

For further confirmation, if such were needed, see the stamp of the Hartford Steam Boiler Insurance Service, on the tube extension. Their representative inspects Fitzgibbons steel boilers before shipment, and "OK's" them only after rigid examination.

FITZGIBBONS 400 SERIES

is the steel boiler that in the small and medium size home will help any oil burner do its utmost. Quick-heating, enduring, quickly installed, easily serviced, it is ideal for replacement or new installations. From name plate to boiler plate you're betting on a sure thing when you select a Fitzgibbons steel boiler. Full data in the bulletin — write.

Fitzgibbons Boiler Company, Inc.
101 PARK AVENUE, NEW YORK 17, N. Y.
Manufactured at: OSWEGO, N. Y. *Sales Branches in Principal Cities*

fueloil & oil heat

burners and Robert A. Kohart in charge of gas equipment.

Honeywell Announces Formation Of Subsidiary Co. in Mexico

FORMATION of its sixth foreign subsidiary has been announced by Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. Honeywell-Brown, S. A., has established headquarters in Mexico City, Mexico, under the management of Virgil H. Hiermeier, who has been with the company since 1940, formerly was manager of industrial instrument sales in Honeywell's St. Louis office. All personnel in the new office, with the exception of Mr. Hiermeier, are natives of Mexico.

Other foreign subsidiaries are operated by Honeywell in England, Belgium, The Netherlands, Sweden and Canada.

Breese Absorbs Oil Devices

A STATEMENT HAS BEEN issued by Norman S. Parker, recently designated executive vice-president and general manager of Breese Burners, Inc., that all assets and liabilities of Oil Devices, Inc., have been assumed by the new corporation. James L. Breese is president.

The Corporation's research laboratory and executive office remains in Santa Fe, New Mexico; general sales and appliance engineering offices are at Chicago.

Three Burner Dealers Ordered To Observe Permit Regulation

SUBPOENAED into police court in Niagara Falls, N. Y., on Building Commissioner Normay G. Ray's complaint, three local dealers, who allegedly have been installing oilburners in homes without obtaining required building permits, were ordered to obtain permits in the future by Police Justice Francis L. Giles. The dealers promised to comply.

Wayne Divisional Managers To Assist In Partnership Plan

FOUR DIVISIONAL MANAGERS have been appointed by Wayne Home Equipment Co., Inc., Fort Wayne 4, Ind., to cooperate with wholesalers and dealers under the company's Wholesaler-Dealer Partnership Plan. They will conduct meetings as follows: J. O. Alton in Texas, Louisiana and east Arkansas; Jack W. Cleveland in the Dakotas, Minnesota and western Wisconsin; Ken C. Meyer in northwestern Illinois, Iowa and Nebraska and William A. Sayler in eastern Wisconsin and Michigan.

All are experienced in merchandising home heating and allied equipment and will conduct the clinics with complete Wayne merchandising plans to tie in with national advertising campaigns. The appointments virtually complete Wayne's divisional manager organization from coast to coast.

Ancient Irish Castle Imports Crotty Boiler for Heating

THE FAMED, OLD Killfinnan Castle in County Cork, Eire, will have an American heating system installed during the summer. Crotty Boiler Corp., Flushing, N. Y., has just shipped a complete heating plant, consisting of an oilburner, tank, Crotty Heat Generator Model S58, with 45 radiators, piping, fittings, valve and tools to install the equipment in the castle.

The BURNRITE Anti-Syphon Valve

GREATLY IMPROVES FUEL PUMP PERFORMANCE

- PREVENTS Back Syphonage
- PROMOTES Top Efficiency

A distinct asset to every oil burner installation, the BURNRITE Anti-Syphon VALVE is today's most effective means by which you can assure your customer of complete freedom from back-syphonage! It eliminates undue wear and strain on fuel pump and motor and will not chatter in operation. A rust-proof and a low-vacuum operating unit, the BURNRITE VALVE requires no attention. Because it assures trouble-free performance, every BURNRITE VALVE installation reduces service calls to a minimum.

Specify BURNRITE VALVES on every oil burner job . . . get in touch with your jobber or write direct.

APPROVED BY NATIONAL BOARD OF FIRE UNDERWRITERS — APPROVED BY NEW YORK BOARD OF STANDARDS AND APPEALS.

BURN RITE

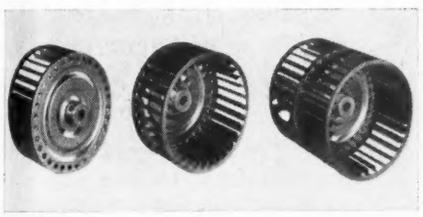
BURNRITE VALVE MFG. CORP.

177 W. FIRST STREET DEPT. A MT. VERNON, NEW YORK

New Products

All-Welded Construction Features Lau Blower Wheel

WELDWHEEL, recently announced by Lau Blower Co., Dayton 7, Ohio, features all-welded construction, with individual



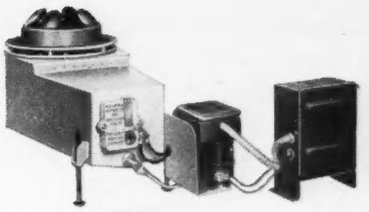
blades of correct length and pitch. During the welding operation, the assembled blades, end-ring, back plate and hub, are subjected to 2,000 lbs. pressure and heat of about 1600° F., to fuse together completely all parts. The operation consumes only a fraction of a second on electronically-operated welders.

Standard hubs are equipped with ½" and ⅝" bores, but hubs also can be furnished for either Lovejoy or Guardian couplings. Depending upon diameter, the wheel length can be selected from 1⅛" to 4½", Weldwheel construction permitting flexibility in blade lengths, according to the manufacturer. WW-6 and DWW-6, 6¼" diameter, wheels are available immediately; WW-5, 5" diameter, and WW-7, 7½" diameter, will be ready shortly.

Oilburner Nozzle Designed For Use With West Coast Oils

A NEW TYPE oilburner nozzle for West Coast oils has been announced by Delavan Engineering Co., Des Moines, Ia. Type BC nozzles are designed especially for use in those areas where the fuel supplied is generally in the heavier range of No. 3 oils, 40 S.S.U. to 45 S.S.U. BC

POWERFUL



Sales Magnet!

Among the exclusive advantages possessed by the H. C. Little vaporizing oil burner is one which has acted like a powerful sales magnet on the general public for 15 years—*pulling* them into H. C. Little dealer outlets and *selling* them after they arrive.

This exclusive advantage—this powerful sales magnet—is

ELECTRIC IGNITION

and The H.C.Little

OIL BURNER is the ONLY vaporizing oil burner, available in a complete line, with ELECTRIC IGNITION,

the patented H. C. Little AUTOMATIC STARTING FEATURE, which provides fully automatic, intermittent operation, thermostatically controlled. NO PILOT LIGHT. NO HIGH-LOW FIRE. The burner either operates at high efficiency or is completely shut down.

Are *you* using this powerful sales magnet to pull people into *your* place of business? If not, inquiries from Eastern and Mid-western territories are invited.

Write Dept. 7

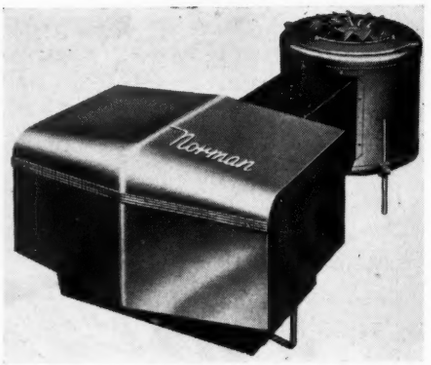
H.C.Little BURNER CO.

SAN RAFAEL CALIFORNIA

nozzles range in size from .85 to 1.35 gph. In larger capacities, up to 8 gph, Delavan type B nozzles can be used successfully with West Coast oils and type A nozzles, which produce a hollow cone spray, are recommended for larger sizes.

Vaporizing Burner Added To Norman Heating Line

CONVERSION TYPE vaporizing oilburner is the latest addition to the heating line made by Norman Products Co., Columbus, Ohio. A double shell burner mixes primary air with oil vapor and a turbulator



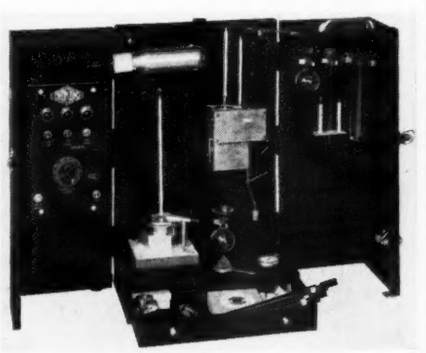
ring, with specially designed teeth, admits secondary air in divided streams at point of combustion. The burner features a patented rotor plate with slanting fan-like blades, which break up the flame into a series of shorter, swirling flames.

Fully automatic, the burner is adaptable to installation in most boilers or furnaces and is adjustable to a maximum capacity of 1 gph. A low wattage, two-speed blower is continuous operating and the air duct is telescopic to fit 16" to 26" firepots. Front and rear legs are adjustable, while controls, housed in a removable cover, are readily accessible.

Rokon Oil Test Set

ROKON oil test sets contain all equipment necessary for field tests to determine flash point, viscosity and gravity of lubricating and fueloils. Roberts-Konrad, Inc., New York 6, N. Y., manufacturer, supplies instruction booklets with each set, showing procedures for running tests, technical data and conversion charts.

The standard model is designed for 115 volts, A.C., to permit electrical operation



of flash point and viscosity tests. The use of an incandescent ignition coil, which ignites volatile gases in the flash point test, eliminates the halo present with an open flame. Temperature of the oil sample is indicated by a standard ASTM thermometer, 200° F. to 700° F. Viscosity is determined as Saybolt Universal or Saybolt Furol. The test for gravity uses standard 4 oz. hydrometers.

Fyrite Combustion Test Kit Has Metal Dial Thermometer

BACHARACH INDUSTRIAL CO., Pittsburgh 8, Pa., announces two new features for the Fyrite Combustion Service Kit. A metal case with metal handle and snaps is now standard equipment. An all-metal

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•

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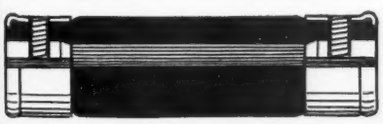
DAMPENS NOISE AND VIBRATION—
CUSHIONS STARTING TORQUE



◀ RUBBER FROM END TO END ▶
NEOPRENE REINFORCED WITH NYLON

FLOATING BUSHINGS

Machined brass bushings are not integral with ferrule—To allow floating action—No die castings

New!

Cylindrically Ground On Center — Concentricity Assured

Lengths—1½" to 10"
Bores—5/16", ⅜", 7/16", ½", ⅝", ¾", 1"

Flexible Coupling Mfg. Co.
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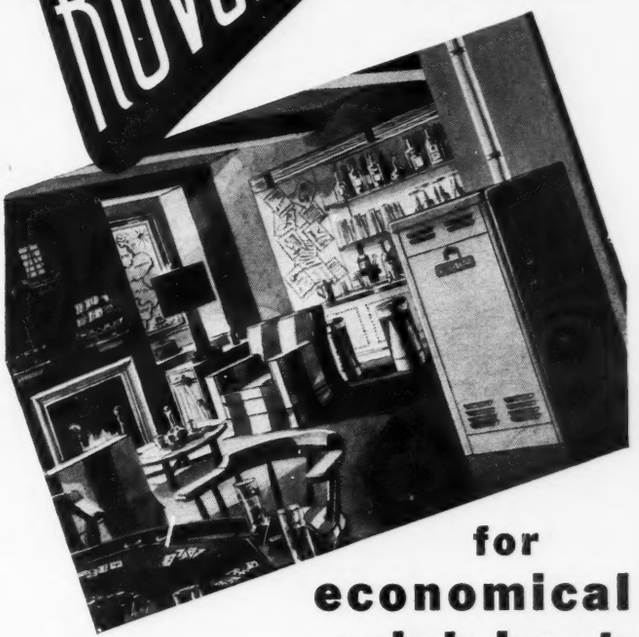
Chicago 37, Ill.
Phone DOR. 2350

KOVEN WATERFILM BOILERS

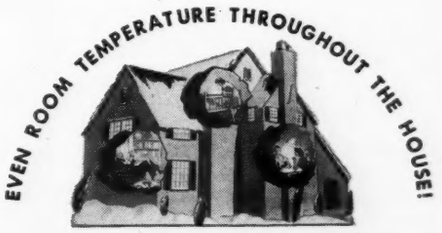


for economical quick heat

Modern design demands a blend of beauty and utility. That's why your customers demand up-to-the-minute KOVEN WATERFILM BOILERS... heating units that combine everything new in service and style.

WATERFILM offers low-cost operation... high efficiency...even temperatures in every room. Its patented construction incorporates all the latest scientific improvements... insures rapid steaming and a plentiful supply of domestic hot water at all times. Every practical home owner welcomes the addition of an attractively jacketed WATERFILM boiler to the basement room.

Made for automatic firing with oil, stoker or gas. Available in several models adapted to small homes, apartment houses or industrial plants. Write for a copy of our free illustrated booklet.



WATERFILM BOILERS, Inc.

154 Ogden Avenue, Jersey City 7, N. J.

Listen to the WATERFILM Broadcast "Vaudeville Isn't Dead"
Mon., Wed., Fri. at 7:45 P.M. and Sun. at 12:15 P.M. Station WNEW

dial thermometer, 100° to 950° F. range, is optional equipment in place of the mercury-in-glass thermometer. The case is standard equipped with bracket for both the dial thermometer and the mercury thermometer.

Advantages claimed for the all metal thermometer include easy readability even in dim light or in "difficult-to-get-at" locations, handling convenience brought about by a unique slip-on handle, and elimination of the many breakage hazards of the ordinary mercury-in-glass thermometer.

Service Kit Designed For Space and Water Heaters

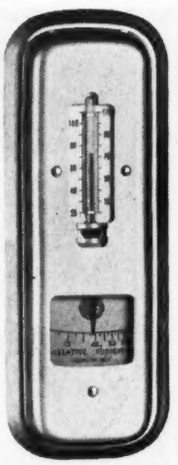
A SERVICE KIT, containing all necessary tools and equipment for field service calls on oilburning space and water heaters, has been made available to oilburner service men by the Service Dept., Heating and Appliance Div., Evans Products Co., Plymouth, Mich.

Contents include draft gauge, graduated glass cylinder and beaker for measuring oil flow, clean-out rod and brush, wrenches and screwdriver, all packed in

a canvas kit which wraps into a roll for easy handling. Distributors of Evans domestic heating equipment have supplies of the kits.

Humidity and Temperature Shown On New Indicator

PRODUCTION of a new wall type relative humidity and temperature indicator has been announced by Friez Instrument Div., Bendix Aviation Corp., Baltimore, Md. Model 182 indicator will operate without attention over extended periods and is sufficiently accurate for industrial and domestic use.



It indicates relative humidity directly in percent from 10% to 95%, within 5% accuracy or better, and registers air temperatures from 20° F. to 110° F. by a red liquid thermometer. Humidity readings are obtained through the medium of specially treated human hair elements. Model 182 indicator is furnished with a heavy metal mounting plate simplifying either permanent or temporary mounting. Overall dimensions are 2⅝" x 7" x 1½" deep.

Iron Fireman Develops Boiler and Furnace Units

SELF-CONTAINED boiler and furnace units for automatic firing have been designed by

USE KLEEN-FLO FOR SUMMER CLEAN-UP JOBS

Check these benefits:

1. Absorbs condensation—keeps entire system water-free
2. Dissolves gums and sludges
3. Eliminates storage tank cleanings and pump-outs
4. Keeps lines clear, prevents clogging and congealing
5. Insures quicker starting
6. Lessens oil baking on atomizers. Fewer burner changes
7. Reduces carbon and soot
8. Improves combustion
9. Gives cleaner firing, faster heating
10. Increases furnace and boiler capacity
11. Eliminates oil odors, smoky chimneys, puffs
12. Protects refractory brick work

KLEEN-FLO cuts service work, reduces call backs, keeps customers satisfied — which means increased fuel oil sales for you. Try KLEEN-FLO today on one of your tough service calls and see the difference.

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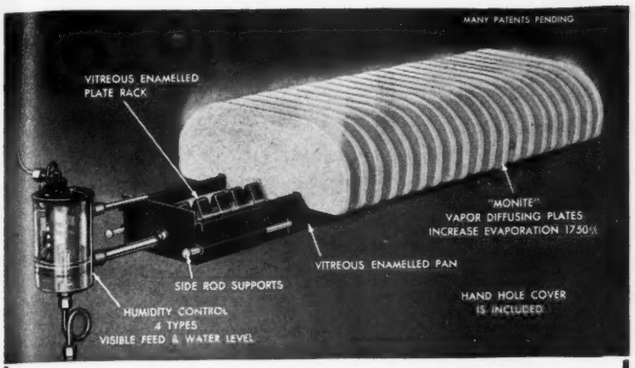
West Coast Distributor
DIAMOND OIL CO., INC.
550 Bauchet St., Los Angeles 54, Calif.


MANY PATENTS PENDING
VITREOUS ENAMELLED PLATE RACK
"MONITE" VAPOR DIFFUSING PLATES INCREASE EVAPORATION 1750%
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SIDE ROD SUPPORTS
HAND HOLE COVER IS INCLUDED
HUMIDITY CONTROL 4 TYPES
VISIBLE FEED & WATER LEVEL

MONMOUTH HUMIDIFIERS

For healthful operation, every heating system, new or old, requires a dependable humidifier. In Monmouth, superb engineering and careful craftsmanship assure the finest available. We make a complete line of humidifiers for all your needs:

- **FLOTROL Humidifiers for warm air or air conditioning.**
- **MICRO-FEED—the simple, low-cost control for drip feed operation.**
- **Monmouth HUMIDITY CONDITIONER, gas-operated, for all radiator heated buildings.**

The trivial extra cost for a genuine Monmouth, over inferior equipment, is more than made up in savings on service and repair charges. Thousands of satisfied users, hundreds of enthusiastic dealers. Get that EXTRA profit from the easy sale of Monmouth Humidifiers on YOUR jobs! Available for delivery now.

Bulletin and prices, also free humidity computation guide, on request.

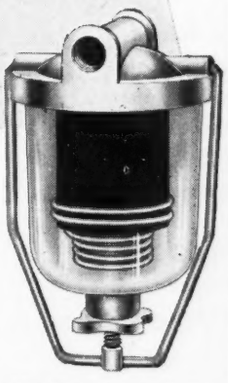
THE CLEVELAND HUMIDIFIER CO.
7808 Wade Park Ave. Cleveland 3, Ohio

CASH IN

on "Chemistone" an exclusive feature of

Klemm

FUEL OIL FILTERS
For Boilers Space Heaters • Ranges



Only Klemm Filters have CHEMISTONE—the original controlled porosity element. *It's a powerful salesmaker!* Stop preventable burner failures. Install Klemm Filters . . . They trap dirt, sediment, water, etc. All customers need this protection for uninterrupted heating comfort. You profit on every sale.

Liberal discounts to dealers.
Write today for full information.

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Oil Burning

WATER HEATERS

Great Team

DESIGNED TO WORK TOGETHER

1 THERMOSTAT

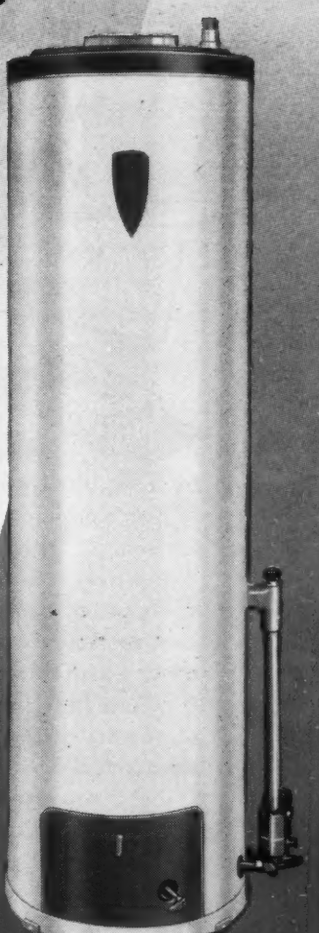
The bimetal element (positive action) GOES UP when cold water enters the tank and GOES DOWN when the water is heated, OPENING OR CLOSING THE VALVE gradually through the operating rod.

2 SLOW OPENING OIL CONTROL VALVE

Responds to the thermostat to increase or decrease the oil flow. It makes this transition (either up or down) gradually so that there is never an overdose of oil.

3 MULTI-STAGE BURNER

Operates from pilot through intermediate fire to high fire and back again to pilot. The flow of oil is changed gradually, insuring a clean fire during these changes.



LOCHINVAR PRODUCTS

A Division of
MICHIGAN TANK & FURNACE CORP.
14247 TIREMAN AVE. • DEARBORN, MICH.

Iron Fireman Mfg. Co., Cleveland, Ohio and Portland, Ore. Furnace units, designated Airborne, provide filtered, heated and humidified air, circulated by furnace blower. All elements for warm air heating are built into the unit's space-saving cabinet.

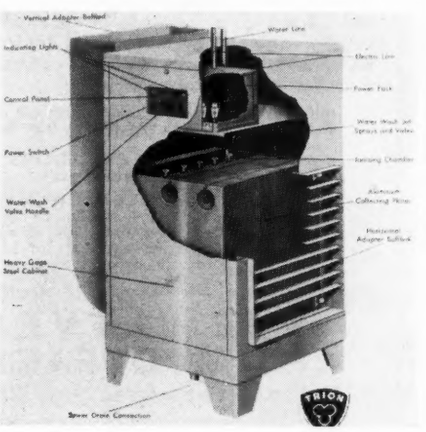
Boiler units are designated Waterborne and in appearance greatly resemble the furnace unit. The unit contains a boiler, built-in Vortex oilburner, instrument panel recessed in the side of the cabinet, and, if desired, an instantaneous hot water coil. Large primary heating surfaces feature the units, adaptable to steam, hot water or vapor system installations.

Two Pole Open Blade Switch

A NEW COMPACT, snap-action open blade switch has been designed by Acro Electric Co., Cleveland 14, Ohio, for 2 pole applications. It is equipped with a patented beryllium rolling spring and made with single and double throw contacts. Standard operating pressures are from 3 to 5 oz., and overall dimensions are 2⅛" x 25/32" x ⅜". Switch is rated at 15 amp., 125 volts A.C., with a movement differential of approximately 1/16".

Trion Electric Air Filter

TRION ELECTRIC AIR FILTER, announced by Trion, Inc., McKees Rocks, Pa., is an attachment for a warm air furnace, which removes dirt and dust from the air by electrostatic precipitation. The unit, connected to the cold air return, imparts an electric charge to the dirt-laden air which passes through it. The air then passes between metal plates with an opposite electrical charge so that the dirt, grit, lint, pollen and even certain germs, says the



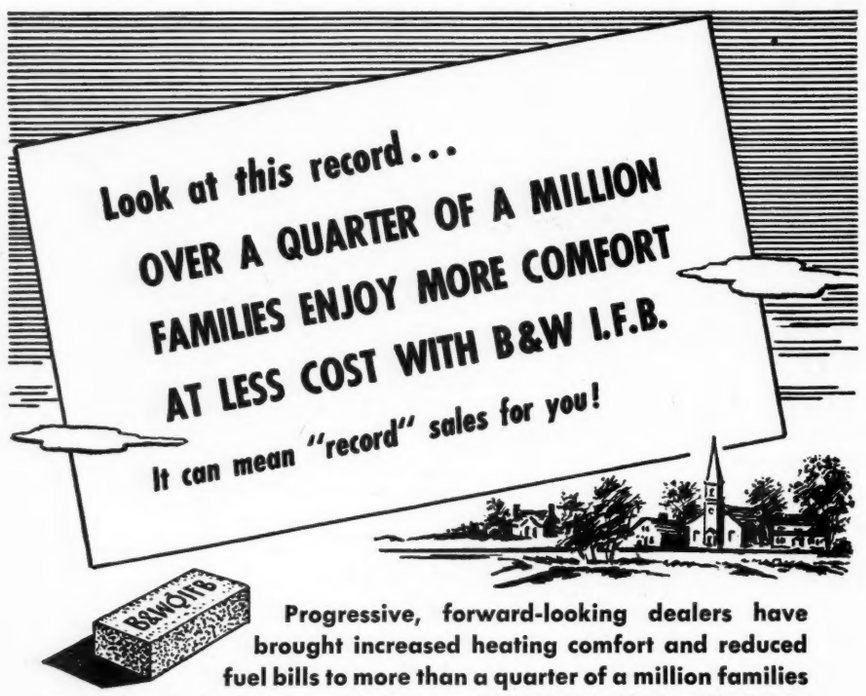
manufacturer, are attracted to and adhere to the plates. The turn of a water valve at regular intervals showers the plates, washes them clean and flushes the dirt down the sewer.

The filter is designed for right or left hand installation, with top, bottom or side connections. Water, electric and drain connections are accessible to permit simplified installation. The unit consists of a power-pack, ionizing-collecting chamber and water wash assembly. Vertical and horizontal baffled adapters are included with each filter. Controls on a central panel are both mechanically and electrically interlocked for safety.

A model, under development now, will be a window unit to serve an individual room or office.

Offers Low Water Control

GLOBE low water controls are offered by Winston Co., Newark 8, N. J. The control is compact in construction, and designed so that the float mechanism is free to function regardless of the amount of pressure or vacuum in the float chamber. A round copper float, held to a shaft with


Look at this record...
OVER A QUARTER OF A MILLION
FAMILIES ENJOY MORE COMFORT
AT LESS COST WITH B&W I.F.B.
It can mean "record" sales for you!
B&W

Progressive, forward-looking dealers have brought increased heating comfort and reduced fuel bills to more than a quarter of a million families by lining their oil burner fireboxes with B&W Insulating Firebrick.

That's an impressive figure—and it carries a vital sales message for you.

It proves that dealers—and customers alike—recognize the advantages of B&W Insulating Firebrick which eliminate odor, soot, and smoke; which reach high temperatures quickly after a cold start; which minimize burner-tip carbonization and furnace noise. It means that, when you install B&W I.F.B. for the linings of your customers' fireboxes, you are assuring them of the satisfactory, economical heating performance they demand.

Have you received your copy of the B&W FIREBOX HANDBOOK? It is an interesting and informative guide to complete customer satisfaction—and more profits for you—through better firebox design. Write for a free copy today.

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Water-Tube Boilers, for Stationary Power Plants, for Marine Service . . . Water-Cooled Furnaces . . . Superheaters . . . Economizers . . . Air Heaters . . . Pulverized-Coal Equipment . . . Chain-Grate Stokers . . . Oil, Gas and Multifuel Burners . . . Seamless and Welded Tubes and Pipe . . . Refractories . . . Process Equipment.

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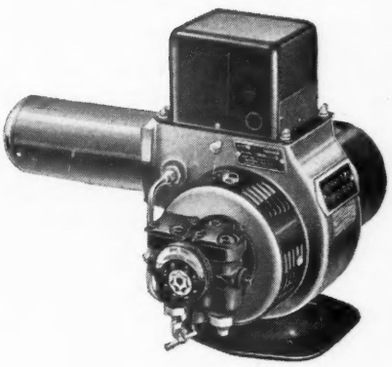
THE BABCOCK & WILCOX CO.
REFRACTORIES DIVISION
GENERAL OFFICES: 85 LIBERTY ST., NEW YORK 6, N.Y.
WORKS: AUGUSTA, GA.

this **burner** is an **earner!**



Because the Quiet May oil burner has earned a topflight reputation for economy and dependability, it unfailingly earns customer confidence and goodwill.

For our dealers, the Quiet May earns steady profits, too. **Prompt** profits . . . because we are now filling all their orders without delay.

Some high-potential dealerships are open. We invite your inquiry.

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QUIET MAY OIL BURNER

fueloil & oil heat

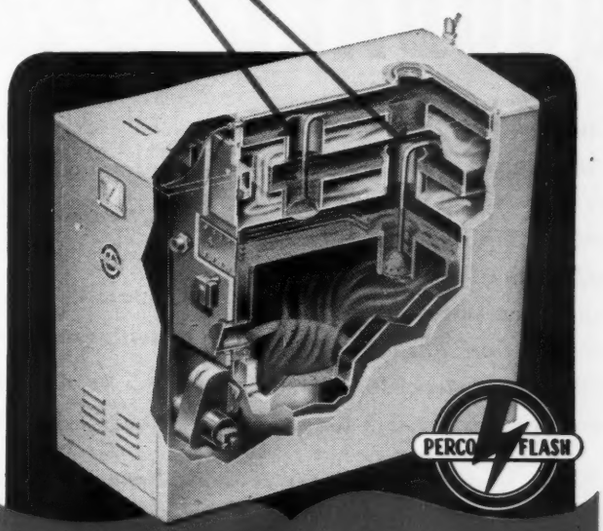
HEATS FASTER
SELLS FASTER

PERCOFLASH
The Flash Action BOILER

with the NEW Percolating Principle

What boilers will discriminating buyers choose when they're in the driver's seat once again? You can be certain of sure sales for PERCOFLASH, the unique, scientifically-designed and thoroughly tested boiler that heats in amazingly fast time—giving all benefits of low-cost steam or water heating and long, trouble-free life.

The PERCOFLASH patented percolater construction heats water faster than any other practical means. It's today's great new boiler development, by an experienced maker of quality heating products. Grow with PERCOFLASH. Get full details today!



WESTCOTT-ALEXANDER, INC.
MADISON, NEW JERSEY

PERCOFLASH

THE *finest* BOILER for OIL, GAS, or STOKER

a lock nut, is sealed with a bronze bellows, soldered ends insuring water tight connections. The control's mercury switch has a maximum operating pressure of 25 lbs. Four screws hold the cover in place and eliminate the necessity for removing boiler fittings when inspection or removal of sediment is desired.

Series B-P-10 controls accommodate installations on boilers having gauge glass tappings from a minimum of 7½" centers to a maximum of 15" centers, while series B-P-S-10 is designed for boilers with 2½" tapping for low water cut-off.

Self-Flushing and Cleaning Provided in New Humidifier

AN ADDITION to the line of humidifiers produced by Skuttle Mfg. Co., Detroit 7, Mich., will soon go into production. The new unit has a finger tip control switch that trips to the flushing position, emptying the unit automatically of all water and residue, eliminating the need for cleanout panels and manual hand cleaning. Waste overflow can be connected to main drain, if desired. When drained, the humidifier is filled automatically.

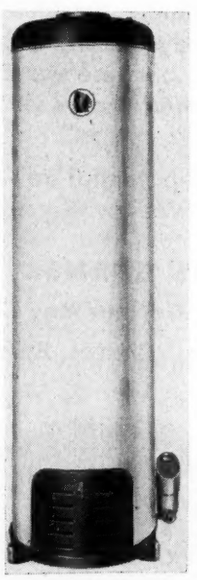
A feature of the flushing and cleaning control is the fact that all Skuttle humidifiers produced during the past eight years can be equipped with it at a nominal cost.

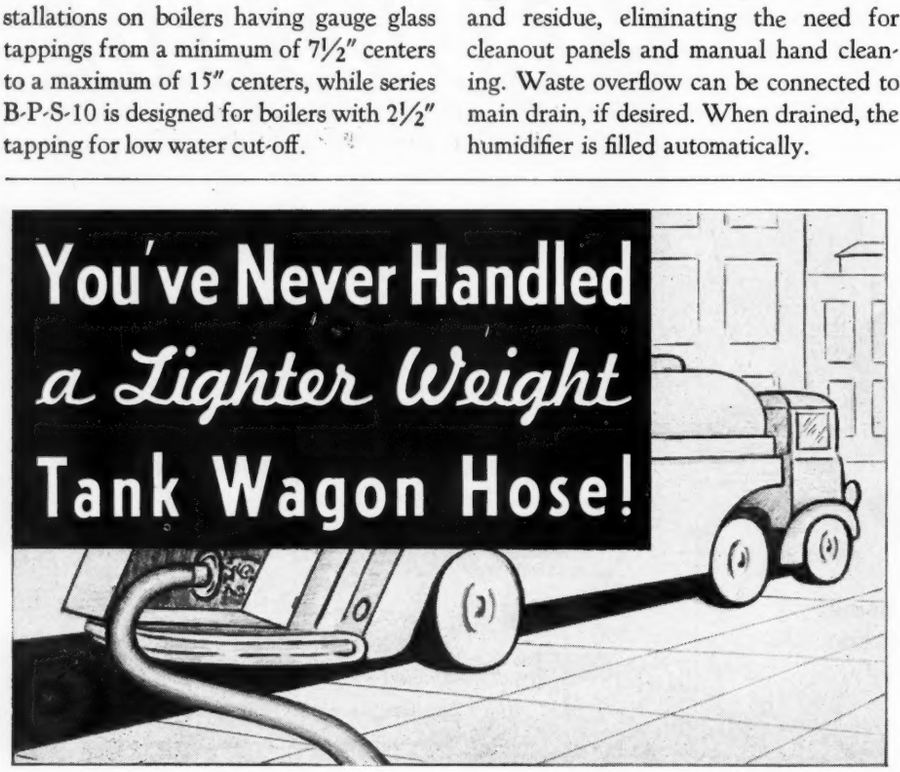
Norwesco Floor Furnace

MODEL FL46 Norwesco Even-Temp oil-fired floor furnace, made by Northwest Metal Products, Inc., Seattle 4, Wash., is designed to heat the average five room house. It is thermostatically controlled, though it must be manually lighted at the beginning of the heating season. Other automatic controls include thermal safety shut-off to prevent accidental overheating. Installation is simple and the burner pot can be taken out for servicing by removing four screws. Experiments for a year before manufacture began, according to the company, resulted in the addition of a baffle in the combustion chamber, a booster fan and properly spaced shell construction. Quantity production is under way at the company's Kent, Wash., factory.

Vaporizing Burner Fires Mt. Pleasant Water Heater

AN OILFIRED WATER HEATER, designated The Chief, has been announced by Mt. Pleasant Heater Corp., Mt. Pleasant, Mich. Employing No. 1 fueloil, the heater has a capacity of 25 or 35 gals., a recovery rate of 33 gals. per hr. at 60° rise. Operation is completely automatic and noiseless. Fired with a 7" pressed steel, gravity type oilburner, the 20 gauge steel outer casing is finished in a high lustre baked enamel. The galvanized tank is built with a 12 gauge shell, 10 gauge top head, 7 gauge bottom and 10 gauge flue wall. Control equipment includes a thermostatically controlled oil valve, cosntant level oil control with water temperature adjustment. Heaters have Underwriters' approval.





GOODALL "Liteflex"

The *lighter weight,* extremely *flexible* hose you've been looking for . . . to speed up deliveries and ease up the two-way handling at each station. But lightness is only one of its practical advantages; for "Liteflex" *has what it takes* to withstand a surprising amount of hard wear and rough usage. Spiral spring wire reinforcement provides resistance to flattening, kinking, crushing. Oil proof tube and cover. Cover made from specially compounded stock to withstand long, rough wear. Sizes 2" to 4", inclusive; maximum lengths of 50 ft.

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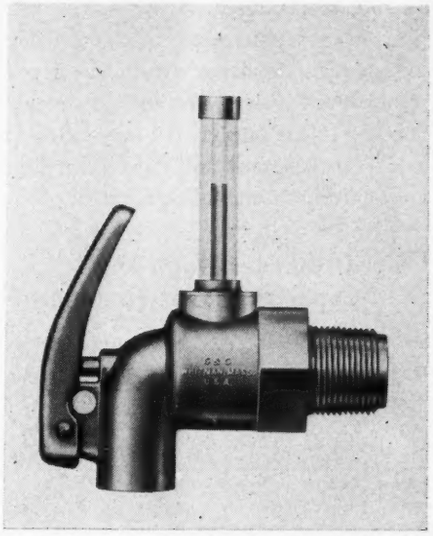
C & C Gauge Faucet For Use on 55-Gallon Drums

C & C DIE CASTING CO., INC., Boston 11, Mass., offers a Gauge-Faucet for use on 55-gal. drums. The unit combines an easy to read gauge with a self-closing lock faucet, which is a Zamac die casting with heavy spring loaded valve steam and Neoprene valve seat. The faucet accommodates a padlock with 1/4" hasp and has a standard tapered 3/4" pipe thread and extra long large hex nut for wrench tight installation.

The gauge indicates approximate contents of drum by non-freezing liquid in a plastic upright. The gauge also is equipped with a Neoprene diaphragm, and in combination with the faucet is Model 5-55.



Air-Drying Agent Prevents Mold and Mildew Formation

DE-MOIST, a dehumidifier discovered during the war, is now available to the consumer and is being manufactured by G. N. Coughlan Co., West Orange, N. J., makers of Chimney Sweep soot destroyer. De-Moist is designed for use where air dampness and humidity should be removed or reduced. It not only attracts moisture up to 100% of its weight, but completely absorbs the moisture like a sponge. It does not drip and when it has absorbed its full capacity De-Moist can be regenerated as

There IS something NEW UNDER THE SUN!

AND SILENT-FLAME HAS IT!

watch next month's issue for
Full Details Regarding this
REMARKABLE FEATURE

•

SILENT-FLAME MFG. CO., Inc.

807 ZEREGA AVENUE . . . . . New York 61, N. Y.

fuel oil & oil heat

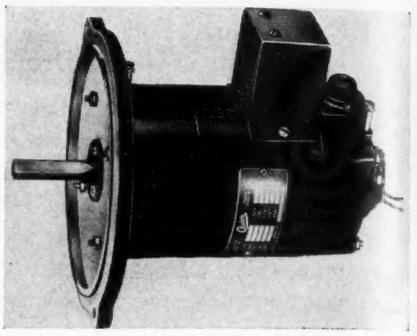
often as desired by baking for an hour or two in an oven. A 12 oz. package is offered for the average room.

Spark Space Heaters

SPARK OILFIRED SPACE HEATERS, made by Hammer-Bray Co., Ltd., Oakland 1, Cal., feature a seam-welded furnace-like inner heating unit and a patented flame spreader to increase flame surface. Models 4070 and 4053 are described in literature as having Btu input ratings of 70,000 and 52,500, respectively. A waist-high heat control valve eliminates need for stooping to regulate flame size, while a constant level valve prevents accidental flooding of the burner. An easy filling inside oil storage tank and Pyrex glass doors are offered as optional equipment.

Oster Oilburner Motor Has Capacity of 1/10 Horsepower

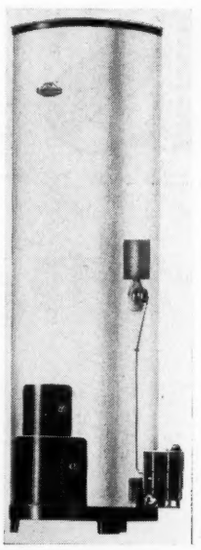
TYPE KS-837 Ostermotor, made by John Oster Mfg. Co., Racine, Wis., is rated at 1/10 hp., 1725 rpm for intermittent duty.



It has a relay starting switch, bronze sleeve bearings and a flange mounting with 6 3/8" rabbet. Overall length, exclusive of shaft extension is 8 3/8"; diameter, 4-27/64"; weight, 15 lbs. Motors can be furnished with smaller flange, having 4 7/8" rabbet.

Storage Type Water Heaters Insulated With Fiberglas

C & L HOFFMAN oilfired automatic storage water heaters are completely insulated with fiberglas, equipped with safety control and regulating thermostat for controlling water temperature. Manufactured by Clayton & Lambert Mfg. Co., Louisville 10, Ky., the units feature a storage capacity of 30 gals., and a heating capacity of 35 to 40 gals. per hr. An automatic draft regulator is standard equipment, as well as thermostat and constant level valve. A safety trip shuts off oil flow in case of emergency. Designed to use range oil or kerosene, the heaters employ a galvanized tank, tested 300 lbs. for 127 lbs. working pressure. Designated model No. 64, shipping weight of the heaters is 280 lbs.



Regal Offers Arrow Gun Type Domestic Oilburner

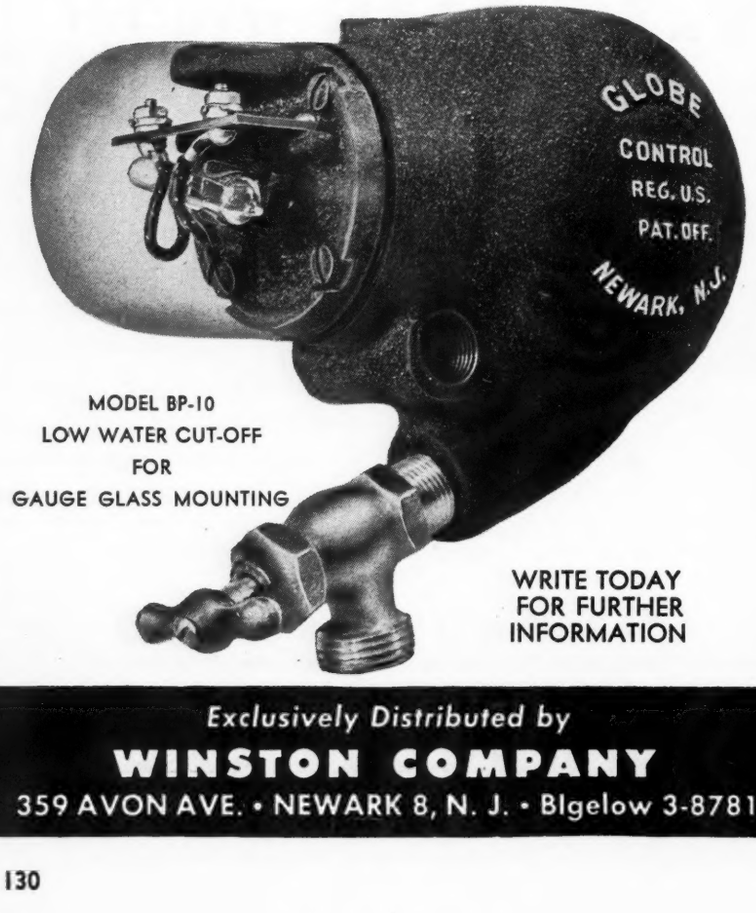
ARROW OILBURNERS, announced by Regal Service & Sales Co., Baltimore 17, Md., are pressure atomizing units, designed for domestic installation. Of conventional de-

Globe "DEPENDABLE CONTROLS"

MERCURY TUBE CONTROLS to REGULATE BOILER WATER LEVEL—

Globe Low Water Cut-Offs Continue to lead the field for Dependability—Durability—Economy—with these new added features—

1. *Larger float chamber—reenforced float and bellows assembly.*
2. *Complete core casting—eliminating possibility of leaks.*
3. *Combination gauge glass fitting with tapping for pressure control.*



MODEL BP-10
LOW WATER CUT-OFF
FOR
GAUGE GLASS MOUNTING

WRITE TODAY FOR FURTHER INFORMATION

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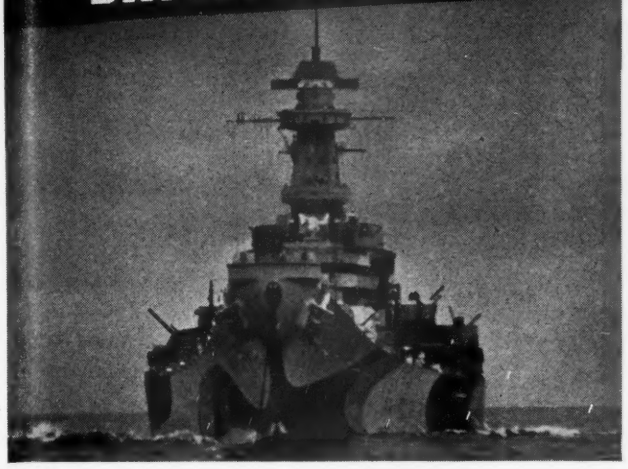
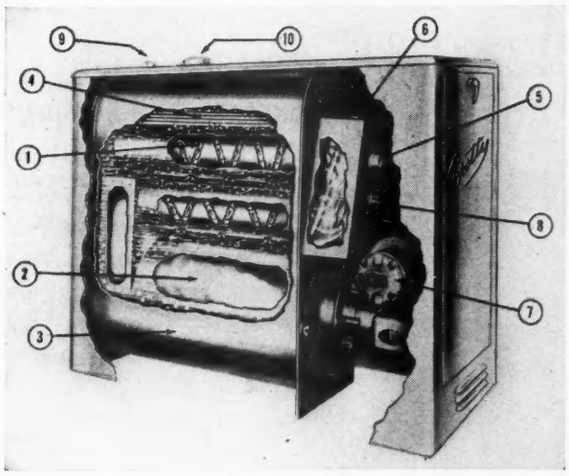
359 AVON AVE. • NEWARK 8, N. J. • Bigelow 3-8781

WITH TUBES LIKE A BATTLESHIP'S BOILER



Official U. S. Navy Photo.



1. *Galloway Tubes* provide fast, positive vertical circulation.
2. Extra large furnace gives complete heat release—maximum heat absorption.
3. Scotch Marine Design—water completely surrounds furnace.
4. Abundant hot water from instantaneous or tank type water heater. Circulation from Galloway Tubes flows between coils, increases heat transfer.
5. Correctly positioned opening for oil burner insures proper installation, minimizes wiring.
6. Screw-in type low-water cut-off simplifies installation.
7. Flange-mounted standard type oil burner provides packaged unit application.
8. Removing one thumb-screw opens clean-out door, exposing all heating surfaces.
9. Safety valve outlet.
10. Steam or water outlet thru split jacket.

Sizes: 320 to 2000 sq. ft. of radiation.

ONLY THE CROTTY BOILER HAS GALLOWAY TUBES

The Crotty teams the Scotch Marine Boiler to the Galloway Tube, carefully applying this century-proved principle to a residential boiler. In marine use, the Galloway Tube has proved rugged and reliable under poorest water conditions. Adapted to the Home Heat Generator, this exclusive Crotty feature has given satisfaction in thousands of homes. We have testimonials to prove it.

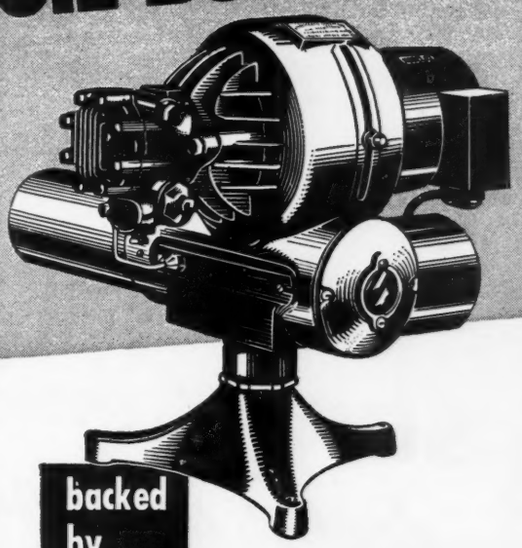
The Crotty has no trick gadgets—plenty of Furnace Volume—perfect balance between gas volume and flue area. Fast, positive vertical circulation. All Oil Burners work well with the Crotty. It's easy to install. Immediate Deliveries. Write for information. On display at Architects Samples Corporation, 101 Park Ave., N. Y.

CROTTY BOILER CORPORATION

FLUSHING, NEW YORK

Sales Office: 60 E. 42 St., N. Y. 17; and Principal Cities.

Nu-Way OIL BURNERS



backed by

- EXCLUSIVE SALES FEATURES
- QUALITY WORKMANSHIP AND MATERIALS
- SOUND DISTRIBUTION PLAN

Backed by over 25 years of experience, Nu-Way engineers have consistently introduced advance developments in the field of automatic oil heating. High standards of production have been maintained, even during periods of material shortage, to assure the best in quality and service. The Nu-Way policy of quality production is backed by a fair distribution plan. Production is allocated to meet demands of the present list of Nu-Way distributors. As production increases Nu-Way Burners will be made available to new jobbers, distributors and dealers. Get more details now on the Nu-Way line of oil burners!

EXCLUSIVE NU-WAY SALES FEATURES

Nozzle shield for trouble-free service. A patented Nu-Way feature.

Air adjustment for positive air control. A patented Nu-Way feature.

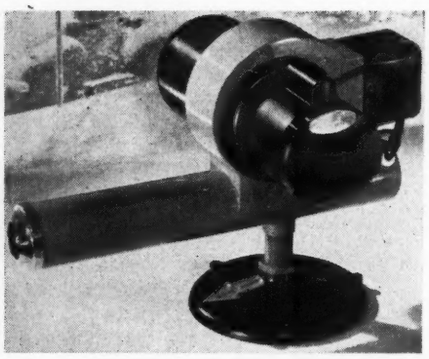
THE Nu-Way CORPORATION

ROCK ISLAND, ILLINOIS

Serving Distributors, Furnace and Boiler Manufacturers

Quality Oil Burners Since 1921

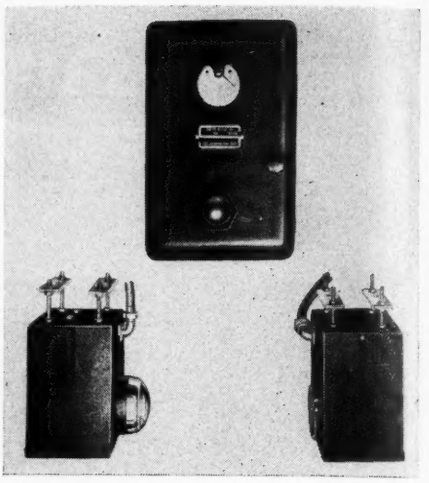
Nu-Way OIL HEATING EQUIPMENT



sign, maximum capacity of the burner is 3 gph, with a Sirocco type fan providing air for combustion. Designed for No. 3 oil, the burner is furnished with 1/6 hp. electric motor. All parts and fittings are of standard construction, facilitating service and replacement, when necessary.

Photo Electric Smoke Indicator

ESS INSTRUMENT CO., Bergenfield, N. J., has introduced model SGL-JS photo electric smoke indicator. Two stack units, mounted across the smoke passage, determine the amount of light cut off by smoke. The exact condition of the gases is read on a meter, and at any predetermined amount of smoke a red signal light is displayed. A bell may be used to provide audible warning. The instrument also is adaptable for use in air conditioning ducts or rooms where warning or switching is desired when small amounts of dirt or smoke are present.



SPARK *invites dealer inquiries*

While current production of SPARK oil burning heaters is allocated to our "old" dealers, *now* is the time for dealers in new territories to plan for future SPARK business.

SPARK is the Pacific Coast's pioneer oil burning heater. SPARK has the features that sell . . . pleasing appearance, visible flame, instant heat, efficient, low-cost operation.

Interested dealers may address replies to:

HAMMER-BRAY CO. LTD.
2619 E. 12th ST. OAKLAND 1, CALIF.

Viking Humidifier Shipped Ready For Installation

MODEL 1920 humidifier, offered by Viking Air Conditioning Corp., Cleveland 2, Ohio, is delivered completely assembled ready to install and is furnished with instructions, illustrations and installation templates. The unit consists of an all copper evaporation pan, 20" long, equipped with eight or more fiberglas evaporator plates. Water supply is controlled by a Viking top seat float valve located outside the furnace in a separate copper tank. A sliding bracket, which supports the pan, is adjustable to various lengths.

Oilburner Wick Needs No Cleaning

THE MYSTERY WICK, introduced by Holyoke Heater Corp., Springfield, Mass., is formed of 700 strands of special yarns, each of which has a core of combustible material encased in a noncombustible wrapping, forming 700 small tubes. The core of each tube will burn down only a short distance, leaving a hollow end or well in each tube. These wells prevent oxygen from reaching the center core, so that when the flame is extinguished the wick does not smolder, smoke or carbonize. The manufacturer, in fact, recommends that users allow the wick to burn dry at least once a week for better per-

OIL BURNING EQUIPMENT

You Can Recommend with Confidence

FOR PERFECT HEAVY OIL BURNING UNDER ALL OPERATING CONDITIONS

Ace UNIFLOW OIL BURNERS
HORIZONTAL ROTARY

Capacity Ranges

	GALLONS PER HOUR	BOILER H.P.	SQUARE FEET STEAM RAD.
MINIMUM	2	6	800
MAXIMUM	165	500	64,000

ACE ENGINEERING CO.
1435 W. 15th Street • Chicago, Illinois
Custom Engineered Oil Burning Systems Since 1931

The attention to detail that marks....

CRAFTSMEN

Cutaway view of Brundage Package Unit.

Model PDRM blower assembly complete with motor.

You'll find none of the sloppy workmanship that characterizes so many products today . . . none of the "that's good enough" attitude . . . here at Brundage. Brundage Blowers and Package Units are made to the same high standards by the same high class craftsmen that have always made Brundage products the fine products of the field. When you want the quality that means longer life and lower operating costs, specify Brundage Blowers and Package Units.

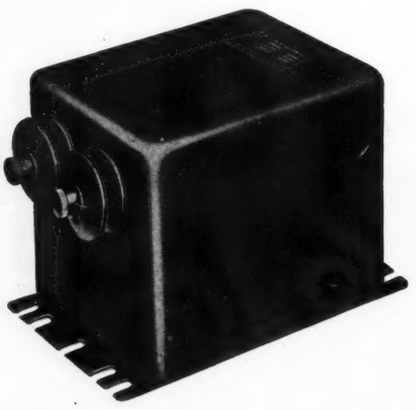
STRADIVARIUS

THE Brundage COMPANY
Blower Specialists Since 1919
KALAMAZOO 11, MICHIGAN

formance and to keep it clean. The tube-wells are said also to afford faster, lighter and hotter flames.

Chevrolet Announces New Line Of Trucks and Commercial Cars

SAFETY, convenience and comfort of owners and drivers were given first consideration in the engineering of cabs and bodies of new trucks now in production, according to an announcement by the Chevrolet Motor Div., Detroit 2, Mich. Sizes range from ½ to 2 tons. Cabs of the new models are 8″ wider and 7″ longer, with a fully adjustable seat, which moves forward or backward on an inclined plane and accommodates three persons. A new ventilating system draws fresh air from outside, forces used air out through vents at the rear of the cab and minimizes fogging of the larger windows and windshields. Chevrolet's full-floating hypoid-gear axle provides a wide variety of capacities and durability. Pick-up bodies all are 50″ wide to provide more load space and corresponding improvements have been incorporated in stake models.



DEPENDABLE

YEAR-IN AND YEAR-OUT

Dongan Transformers have long been used on leading makes of oil burners. For long life and dependable service, you can't beat a Dongan! Listed as standard by Underwriters' Laboratories.

Write for Bulletin.

DONGAN ELECTRIC MFG. CO.

2981 Franklin Detroit 7, Mich.

The Dongan Line Since Nineteen-Nine

WRITE FOR LITERATURE

DONGAN TRANSFORMERS

Dwyer Hook Gauge

A NEW HOOK GAUGE, up until now used by F. W. Dwyer Mfg. Co., Chicago, Ill., in its factory, is being offered to the industry at large after requests from fan and oilburner manufacturers who plan to use it for checking other instruments. With the exception of hooks and micrometers, the entire gauge is made of unbreakable, transparent plastic, with no moving parts. The device works on the principle of the "U" type water column gauge, capillary pull on which has been overcome by widening the columns to 2½″.

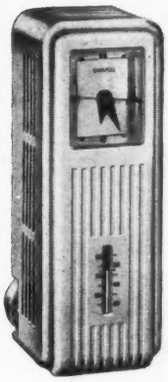
Fuel Pumps Under Repair Held Firmly By New Device

A DEVICE, developed by A. B. Wolle & Co., Scarsdale, N. Y., is offered for sale to oilburner service companies. Designed to hold firmly fuel pumps and units while they are being repaired, it consists of a

clamp that secures the pump around its hub. The clamp is secured to a rotatable shaft secured in the position selected by a movable piece in the stand. A swivel device permits the operator to place the pump in any one of four positions, to make all parts of the pump accessible. Insertion and removal of the pump is accomplished in one operation and the vise is rigid enough to sustain without distortion the pressure of a 24″ wrench.

Kewanee Type R Boilers Simplified and Redesigned

NET LOADS of Square Heat boilers range from 900 to 3000 sq. ft. of steam radia-



Sampsel Day-Night Clock Thermostat

A Complete Line of Quality Controls

There is a complete line of proven, dependable Sampsel controls for finer performance, easy installation, and freedom from servicing. Write for illustrated catalog.

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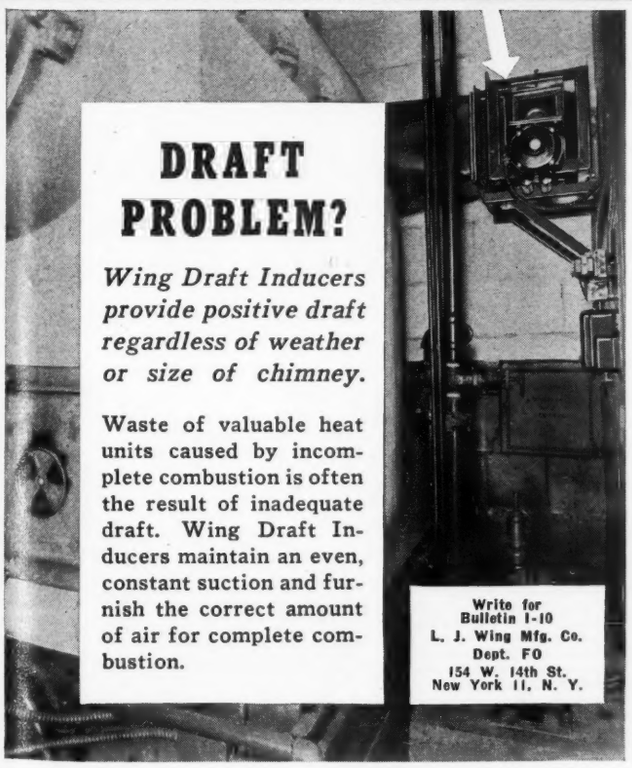
Sampsel
AUTOMATIC CONTROLS

Canadian Sales Distributor: PEASE FOUNDRY CO., Ltd., Toronto 1

Wing Draft Inducers

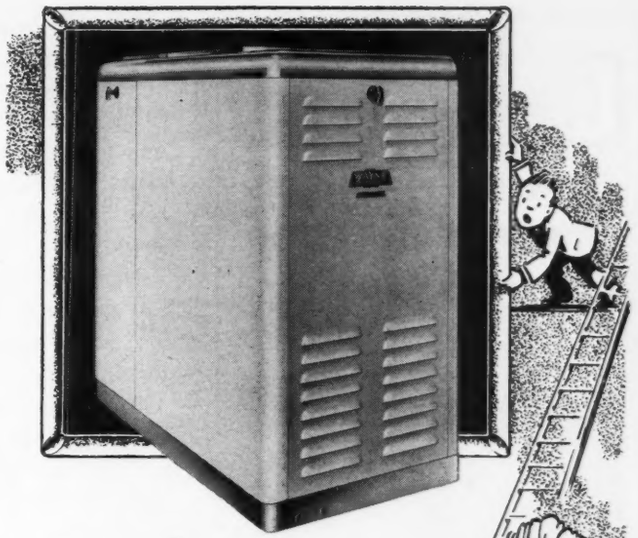


DRAFT PROBLEM?

Wing Draft Inducers provide positive draft regardless of weather or size of chimney.

Waste of valuable heat units caused by incomplete combustion is often the result of inadequate draft. Wing Draft Inducers maintain an even, constant suction and furnish the correct amount of air for complete combustion.

Write for Bulletin I-10
L. J. Wing Mfg. Co.
Dept. FO
154 W. 14th St.
New York 11, N. Y.



Hold it— MR. DEALER!

WAYNE HOME EQUIPMENT

Here's the *NEW* Wayne Thermo-White Oil Furnace!

In every business there's a leader. Wayne proudly presents Thermo-White, most desirable of fully automatic oil fired winter air conditioners. Economy of operation and expert design are typical of all Wayne Products. Wayne backs quality with active merchandising helps. Write for details of the Thermo-White dealer merchandising advertising.

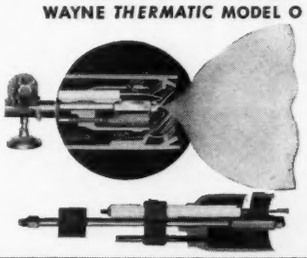
Thermo-White

. . . the sales sensation of the Oil Heating Industry is Here!

GLEAMING WHITE ENAMEL • FOREST GREEN TRIM

Matches Wayne water softeners, heaters and other equipment in recreation and utility rooms. No wonder Wayne dealers sold carloads in advance of public announcement! Imagine the demand when available newspaper dealer ads tie in with Wayne's national advertising! Thermo-White is Wayne's latest addition to a full line of oil and gas heating systems and conversion burners, and automatic home water systems. Write for details of the Thermo-White Furnace today!

THERMO-WHITE IS EQUIPPED WITH WAYNE *THERMATIC* MODEL O OIL BURNER



ECONOMY PLUS

More complete combustion with higher CO_2 rating for record economy. Firing head is rifled like a gun barrel. Adjustments are easily made from rear of burner. Burns standard fuel oils.

Write for Details of the Wayne Partnership Plan

THE WAYNE HOME EQUIPMENT CO., INC.
FORT WAYNE, INDIANA

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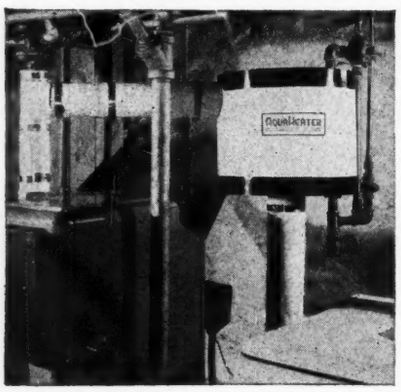
fuel oil & oil heat

AQUAHEATER

—THE ONLY TANKLESS WATER HEATER WITH

ALL 3 FEATURES



1. BETTER DESIGN

Thirty-four years of heat exchanger experience are built into the coil and shell design of the AquaHeater. The unique Turbuflow copper coil assures a maximum flow of domestic hot water, with no place for steam or air to cause vapor-look and consequent erratic or noisy operation. The flow of hot boiler water around the Turbuflow coil in which domestic water continually rises as it passes through, gives full use of the counter-flow principle. Boiler pipe connections are scientifically placed on the shell for positive circulation.

2. FULLY-WELDED SHELL

No gaskets to be fitted. No danger of leaks. The shell is welded and pressure-tested after the copper coil is in place. Only boiler water contacts the steel shell, hence it will last at least as long as the boiler.

3. PRE-FORMED INSULATION

Substantially reduces stand-by losses and saves many fuel dollars yearly. Pre-forming insures ease of application. Its attractive appearance makes AquaHeater suitable for club basement or other installations where beauty and compactness, as well as practicability are desired.

AquaHeater features build customer satisfaction and good will . . . make easier sales and more profits. AquaHeater is simple to install. Try one the next time you put in a hot water heater—whether in a new house, a conversion, or replacement of a leaky storage tank. One trial, you and you'll use AquaHeater ALWAYS!

For further details see your Plumbing Supply House or write

JOSEPH E. LEWIS & CO., INC.

Department B

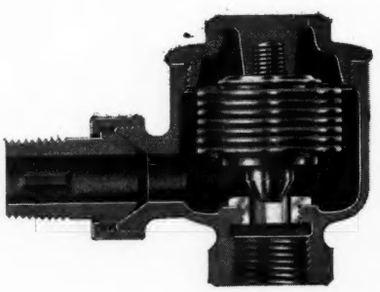
BALTIMORE 30, MARYLAND

tion for mechanical firing, or 740 to 2480 sq. ft. with hand-firing. The boilers being offered currently by Kewanee Boiler Corp., Kewanee, Ill., as Square Heat, are simplified and redesigned versions of previous Square Type R models. Eight units now form the line, designated the 3R series.

Designed, rated and produced under SBI standards, the boilers also are available in hot water models, where ratings for mechanical firing are from 1440 to 4800 sq. ft.; 1180 to 3970 sq. ft. for hand firing. All boilers are electrically welded and incorporate features of bigger Kewanee steel boilers.

Nicholson Radiator Traps

TYPE R radiator traps for draining condensate and air from vacuum and vapor heating systems up to 25 lbs. maximum pressure, are offered by W. H. Nicholson & Co., Wilkes-Barre, Pa. Series 2A has a nominal capacity of 200 sq. ft. EDR at 1½ lbs. pressure differential, Series 4A, at the same differential, has a capacity of 400 sq. ft. EDR. Thermostatic bellows provide maximum value opening with slight temperature difference between

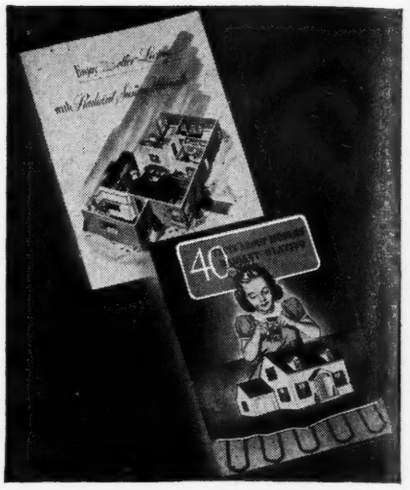


steam and condensate. Body, cap and union of value are of corrosion-resistant brass and the renewable valve seat is stainless steel.

Add Industrial Burner To Iron Fireman Line

TYPE R horizontal rotary oilburner is designed for firing with No. 6 oil, or lighter, in all types of high or low pressure boilers and industrial applications. Manufactured by Iron Fireman Mfg. Co., Cleveland 11, Ohio, RM and RMH models are designed for manual operation; RA and RAH models, full automatic operation, with capacities for the complete line ranging from 8 to 125 gph.

The burners feature a metering pump



How to Sell Boilers in Two Easy Lessons

The story of radiant heating is presented colorfully and convincingly in these two new booklets, aimed to help you sell more hot water and steam heating equipment . . . and to give home planners *all* the facts about comfort heating.

1. *Enjoy Better Living* is sponsored by The Institute of Boiler and Radiator Manufacturers through a national advertising campaign. Order your copies from the Institute at 60 East 42nd Street, New York City, Dept. SS.

2. 40 *Facts About Modern Radiant Heating* is a non-technical, easy-to-read H. B. Smith booklet featuring the outstanding advantages of radiant heating in *all* its forms. It, too, is being advertised nationally. Write to the H. B. Smith Co., Inc. for copies.

You can assure yourself that all the home planners in your community are prospects for *your* services by sending them copies of these booklets under your own name. So take advantage of this unique service *now*.

H.B. Smith

CAST-IRON BOILERS

THE H. B. SMITH CO., INC.,

68 Main St., Westfield, Mass.

Offices and Representatives in Principal Cities

BACHARACH'S

NEW! ALL-PURPOSE DRAFT GAUGE

Meets Every Need for INSTALLING and SERVICING Every Type of HEATING EQUIPMENT

Gauge can be located any distance from test point. Reads .25" on 3-inch scale. Free movement of pointer at zero to indicate "puff-backs." Stands firmly, or can be hung on wall. Body serves as reel for carrying rubber tubing. Accurate, durable, dependable.

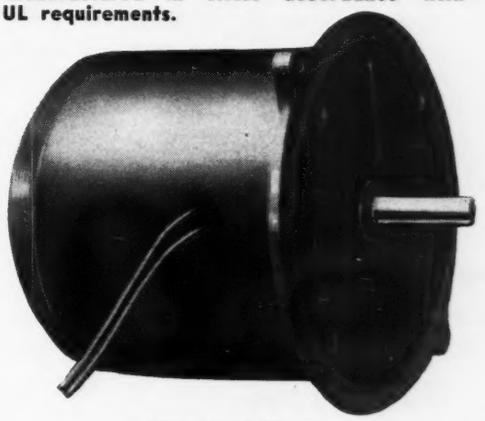
Prompt Delivery

Write at once For Prices and Full Information

COLE-SEWELL ENGINEERING CO.
2288 University Ave.—St. Paul 4, Minn.

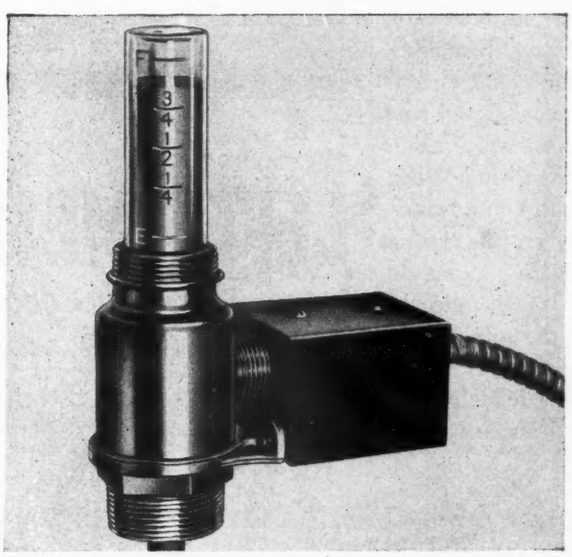
FLANGE MOUNTED A-C MOTORS 1/6 HP.

SINGLE PHASE—50/60 CY., 115 V.
DELIVERY—2 to 3 WEEKS
Manufactured in strict accordance with UL requirements.



Also Available in
1/6, 1/4 and 1/3 HP.
and CAPACITOR-START 1/4 HP.

BROWN ELECTRIC COMPANY
FOREST HILLS, N. Y.



DIXON CUT-OFF OIL GAUGE

For use on 275 gallon tanks, automatically cuts off oil burner when supply gets low. With the Dixon Oil Gauge loss of prime, clogged filters, clogged nozzles, and other service problems are reduced to a minimum.

NEW YORK AIR VALVE CORPORATION
611-21 BROADWAY - NEW YORK 12, N. Y.

RECOMMENDED AS A *Best Buy* BY NATIONAL RESEARCH EXPERTS

The New Modern
paragon
NONE BETTER
OIL BURNER

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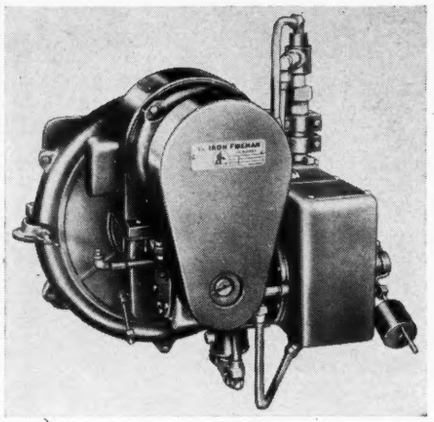
Paragon Oil Burner Corp. ★ Telephone EVergreen 8-4100
75 BRIDGEWATER STREET • BROOKLYN 22, N. Y.

which controls the flow of oil by pulling oil into a cylinder with the movement of a piston. Multiple cylinders in the Oil Volumeter, as this feature is called, maintain an even flow, the piston moving forward into each cylinder in turn and expelling the oil into the feed line. The length of each piston stroke governs the amount of oil fed to the burner, with oil temperature or viscosity having no effect on the amount of oil expelled by the cylinders.

An oil reservoir, in which the metering pump is submerged, has sufficient capacity to supply the burner long enough to prevent flame failure which might be caused by short interruptions in oil feed. The reservoir also vents automatically any air that may be drawn into the suction line. V-belt drive is standard equipment on all models, and adjustable vanes, which control the shape of the primary air stream and the flame, are located well back of the oil nozzle to prevent fouling by carbon deposits.



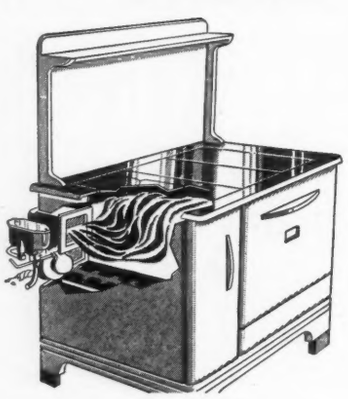
Profits!

Through the

SUPER-THERM

Combination

OIL BURNER



SALES prospects for this modernizing, easily installed oil burner are *all* owners of gas, wood and coal stoves and ranges. Super-Therm fits any size stove, front or rear —will last a lifetime—will not soot or smoke—has automatic safety features. Write now for details and *dealer profit* facts.

THERM OIL BURNER CO.

Pioneers of the Oil Burning Industry

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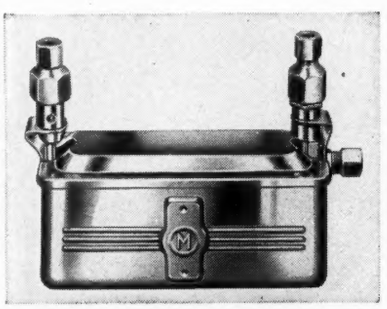
SEATTLE 1, WASHINGTON

"Atomick" Humidifier Is Air Operated

THE "ATOMICK" humidifier, introduced by Maid-O'-Mist, Inc., Chicago, Ill., is a simple air-operated device for adding humidity to indoor atmospheres, designed particularly for use in industry where maintenance of proper humidity is vital. When hooked up for service with a unit heater, humidification starts when the heater starts, with the unit delivering a constant spray of water vapor directly into the warm air flow as long as the unit heater is in operation. The humidifier also may be controlled separately by a humidistat, if desired. If a compressed air line is not available, a small compressor, such as artists use, may be employed.

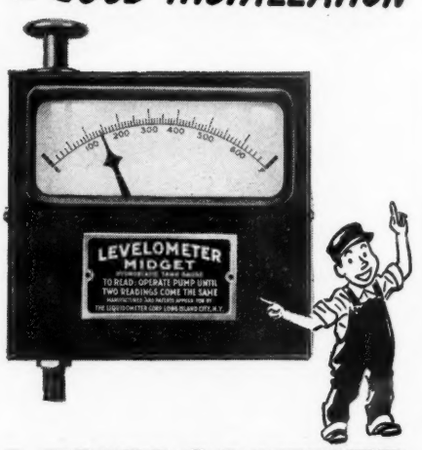


The single spray unit will atomize up to 1¼ gals. of water per hour, the four spray unit, 5 gals. per hr. The unit is recommended for atomizing and dispensing D.D.T., or other liquid insecticides and can be used for distributing in mist form any liquid that will flow freely through pipes.

Marine Water Circulator Available In Five Sizes

MARINE INDUSTRIES, INC., Chicago 10, Ill., has added a water circulating pump to its line. Available in five sizes, the announcement points out that models are available for immediate delivery. Circulators are operated by a sleeve-bearing ⅛ hp. motor and can be installed in any hot

A GOOD GAUGE COMPLETES A GOOD INSTALLATION



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"THEY'RE ALWAYS DEPENDABLE"

"LIQUIDS WORTH STORING ARE WORTH MEASURING"

THE **LIQUIDOMETER** CORP.

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GENERAL CONTROLS . . .
THE ACKNOWLEDGED STANDARD IN AUTOMATIC PRESSURE, TEMPERATURE AND FLOW CONTROL UNITS

Here are a few of an outstanding line of controls for Industrial, Commercial and Domestic applications.

★ALL-GAS CONTROLS
★AIRCRAFT CONTROLS, ELECTRIC
★AUTOMATIC SAFETY PILOTS
★GAS REGULATORS
★LOW WATER CONTROLS
★GOVERNOR TYPE VALVES
★HI-LOW-OFF VALVES
★INDUSTRIAL VALVES
★LOW PRESSURE GAS VALVES
★MOTOR OPERATED VALVES
★MAGNETIC GAS VALVES
★PILOT BURNERS
★PILOT GENERATORS
★REFRIGERATION VALVES
★SOLENOID VALVES
★STRAINERS—RELAYS
★100% SHUT-OFF VALVES
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Controls for air, water, steam, natural, manufactured and liquefied petroleum gases, light and heavy oils, etc., refrigerants such as: freon, methyl chloride, sulphur dioxide and ammonia.
A.C. or D.C., normally closed or open types. High and low pressures and temperatures. PROVED AND IMPROVED PERFORMANCE IS PROOF THAT YOU CAN'T BUY BETTER CONTROLS.

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801 ALLEN AVENUE GLENDALE 1, CALIF.
Manufacturers of Automatic Pressure, Temperature and Flow Controls
BRANCH OFFICES AND DISTRIBUTORS IN ALL PRINCIPAL CITIES

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For Automatic Heating

THE SURE CURE FOR COLD RADIATORS

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Since 1887 — Mfrs. High Grade Heating Equipment
CRANFORD NEW JERSEY

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BIG NEWS AT

SILENT KORTH OIL HEAT
OIL BURNERS · AIR CONDITIONING OIL FURNACES · OIL BOILERS
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America's Favored
OIL BURNER

Because of its many outstanding features . . . and its record of superior performance over ordinary burners . . . Heatcraft is enjoying ever increasing enthusiasm among users from coast to coast.

Write or wire today for details about the 7 important Heatcraft features and the attractive set-up for Heatcraft dealers and distributors.

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HEATCRAFT COMPANY
VAUGHAN BLDG., LOUISVILLE, KY.

GUARDIAN *flexible* COUPLINGS

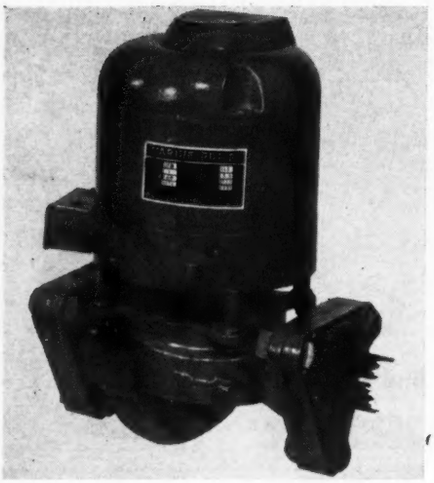
Sleeve end of coupling is close sliding fit on blower wheel hub. Power is transmitted through four spline ribs of coupling fitting four spline grooves in blower wheel hub.

FOR OIL BURNERS

These exclusive direct drive couplings with rubberized cushion gripped permanently, have no parts to lubricate or get out of order. Guardian Flexible Couplings minimize misalignment, free-end float, and backlash. Custom-made for specific jobs. Over a million tested and proved in oil burners in last ten years.

Manufacturers, Jobbers or Dealers—

GUARDIAN PRODUCTS CORP.
1213 E. Michigan St., Michigan City, Ind.
WRITE or WIRE



water heating system, either existing or new installation. Sizes offered are 1", 1¼", 1½", 2" and 2½".

Ball Bearing Electric Motor

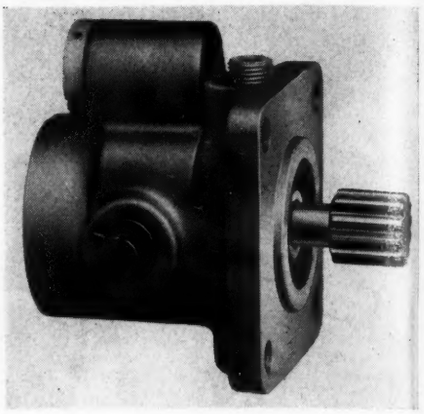
KASSON ROTOMOTORS, a product of General Die and Stamping Co., New York, N. Y., are being offered with several improvements. These ball bearing motors have an all-steel housing and specially designed baffles and louvres in the housing to minimize heat rise. Starting winding of the motor is made from glass insulated wire and gun-metal oxidation of the starting mechanism prevents rust. Available in 1/3 hp size, plans are being formulated to produce a complete line from ⅛ to 1 hp when the materials situation improves.

Commercial Motorized Valve

A MOTORIZED VALVE, adaptable to commercial heating, air conditioning and cooling systems, is announced by Automatic Temperature Control Co., Philadelphia 44, Pa. It operates from 24, 110 or 220 volts A.C. power and employs an induction type motor for positive power drive through worm and spur gear reduction. Available in globe or butterfly types in sizes ½" to 4", screwed or flanged ends.

Rotary Vane Fuel Pump Is Light In Weight

MODEL RD-7750, a non-pulsating, rotary vane type pump is a self-priming positive displacement unit designed for handling fueloil. Though weighing only 14 oz., the pump is said to be sturdy and available with by pass and relief valves as well as a variety of drive couplings for adapting to different electric motors. Romec Pump



Co., Elyria, Ohio, manufactures the pump which operates at pressures up to 60 lbs.

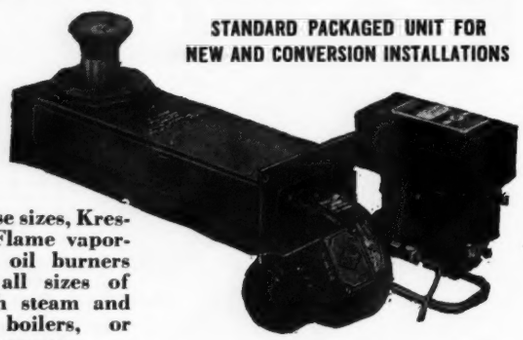
Removes Water, Solids From Product Streams

EXCEL-SO water separators and filters are available in capacities ranging from 10 to 1500 gpm, designed for use at loading racks, delivery trucks or transport trucks. Warner Lewis Co., Tulsa 8, Oklahoma, the manufacturer, explains that the oil flows at reduced velocity through a grid into a patented coalescing media, causing large slugs of water to drop to the bottom

Now Made In 3 Sizes

105,000, 140,000, 210,000 B. T. U.'s input

STANDARD PACKAGED UNIT FOR NEW AND CONVERSION INSTALLATIONS



With these sizes, Kres-Kno Ball Flame vaporizing type oil burners will heat all sizes of homes with steam and hot-water boilers, or warm-air furnaces.

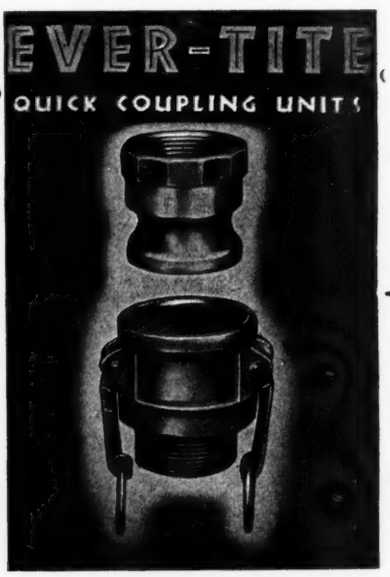
This automatically operated, gravity feed burner is low priced, light weight and is furnished complete. No extra parts needed.

Immediate Delivery. Thousands in successful operation. Backed by our experience of 28 years.

A few choice territories still available. Write or wire for franchise.

KRESNO-STAMM MFG. CO., INC.
345 Commercial Ave.,
Palisades Park, N. J.

KRES-KNO *Ball Flame*
VAPORIZING OIL BURNERS



SPEED ● SAFETY ● ECONOMY

Quick, tight connections for all fuel oil and gasoline handling requirements. Positive action — No lugs, springs, ball bearings or snaps.

SIZES ½" TO 8"

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Jobbers Throughout the U.S.A.

You Know at a Glance!

Write for complete details.

No guessing with AT-A-GLANCE. You know too, that they are guaranteed leak-proof — are "tailor-made" to fit all tank sizes and shapes — are sturdily built to withstand excessive pressure, and are fully Underwriter listed.

KRUEGER *Sentry* GAUGES

GREEN BAY • WISCONSIN

FROM THE MALE OF THE MONTH

ROTOFLAME

Dear John,

With my eye on the future, I'm writing about your eye -- the Electric Eye in your Rotoflame Spot-O-Lite burner. It sure is a Beaut!

Why, Mrs. Peabody over on Elm Street says she sure feels safe with that eye watching over her safety and heating comfort. She wants a supply of literature so that she can hand it out at the next Ladies' Aid meeting. She really is going to town for me and Spot-O-Lite.

The boys in the association are sure jealous of me. They say that when I go after a job with the Spot-O-Lite they haven't a chance to make a sale even by cutting prices way below mine.

Ship my July quota of Spot-O-Lite burners and a supply of literature as soon as possible so I can keep my new salesman (Mrs. Peabody) happy.

Your faithful representative,

Earl Heeter

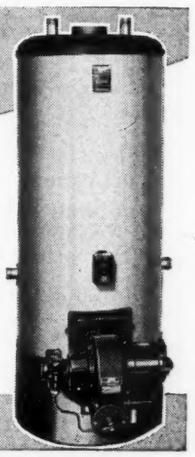
Specialist in Oil Burner Repairs

Exclusive territories available for well-established dealers

OIL EQUIPMENT LABORATORIES, Inc. ELIZABETH 4, NEW JERSEY

Bock OIL BURNING WATER HEATERS

TWO BURNER TYPES — VAPORIZING WITH ELECTRIC IGNITION FOR THE SMALL JOB—PRESSURE ATOMIZING FOR THE LARGER. THE BEST IN OIL WATER HEATERS.



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CONVERSION OIL BURNERS

U.L. approved gun type—complete with controls

FORCED AIR OIL FURNACES

Write for complete details on Special Discounts and Territorial Franchises

ACME HEATING AND SUPPLY
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Just why should I switch over and handle Gulf Fuel Oil?

'Cause you'll get all five, that's why!

1. Satisfied customers. For Gulf Fuel Oil is uniform.
2. Fast distribution—convenient, too.
3. A brand with billboard, car card, radio advertising.
4. A name people know and trust. The Gulf name.
5. Special helps. Display material, ads, and other sales helps. Get all five. Handle Gulf Fuel Oil.

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Nicholas Bldg. Toledo 1, Ohio
Hurt Bldg. Atlanta 1, Ga.

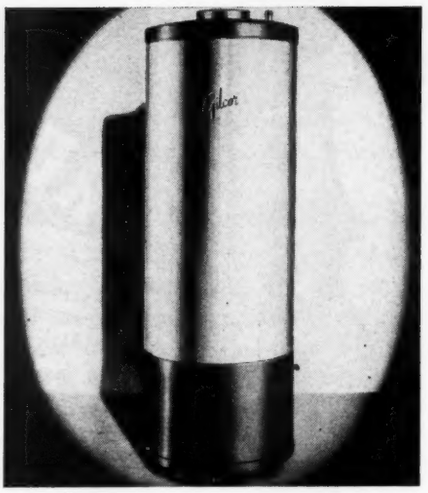
fuelfoil & oil heat

of the separator immediately. In the coalescing zone, finely divided water particles are joined with other particles, forming large globules. The oil then passes into a settling zone large enough to permit all coalesced water globules to settle out. Water drains into the accumulator leg, where float valves open automatically to drain collected water.

The coalescing media traps solids also by infiltration. The separators will operate for long periods with no servicing when the product handled is relatively clean. Even when clogged by dirt or muck, the unit can be restored to operating efficiency with a repack of the coalescing media.

Gilcor Oil Water Heater

AN UNUSUAL BASE DESIGN on the oilfired water heater made by Gilcor Products Corp., Dowagiac, Mich., uses structural supports so that the door in the base extends half-way around the heater. The back plate can be easily removed to give 360° access to the burner and oil control. The burner, attached to the base of the tank by hook brackets, can be dismantled



rapidly. By placing the cold water inlet at the bottom of the tank, it is claimed that stratification has been overcome.

Hexdall Duct Hangers

A. M. HEXDALL CO., Morris, Ill., introduces the Hexdall duct hanger, 5" x 1½" wide. The hangers come with two right angle prongs at the top and one curved prong at the bottom, are made of 16 gauge steel. The material is flexible enough to be bent with pliers into any desired shape. In use, one of the top prongs is driven into the duct with a hammer to make an opening into which the curved prong is driven up and into the duct. The two upper prongs when driven into the supporting joist or beam provide quick and secure fastening for the duct.

A reference sheet, available from the manufacturer, explains and shows by diagram twenty-four applications of the hanger and how it is used under varying conditions. The hangers can be used on all types of duct material and are distributed through jobbers, packed 250 to the carton.

Galvalloy As Aluminum Or Magnesium Solder

RECENT CHANGES in the M-43 tin order have made it possible to use Galvalloy as an aluminum or magnesium solder. According to Metalloy Products Co., Los Angeles 54, Cal., the manufacturer, molten zinc, ordinary solder or pot metal can be poured against the Galvalloy'd surface of the magnesium and a permanent bond obtained. One new use for Galvalloy is the repair of corroded areas in degreasing tanks.

PROVED PRACTICES
in Installing
and Servicing
AUTOMATIC
HOME HEATING
PLANTS
This new, practical service manual, containing information of everyday usefulness, is offered free of charge in the interest of better home heating.
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We are—☐ Dealer... ☐ Jobber... ☐ Mfr.—selling heating equipment checked:

☐ FORCED WARM AIR ☐ GRAVITY WARM AIR ☐ STEAM ☐ WARM WATER

☐ Gas-Burning ☐ Oil-Burning ☐ Stoker-Fired

3

LESS OIL--MORE HEAT

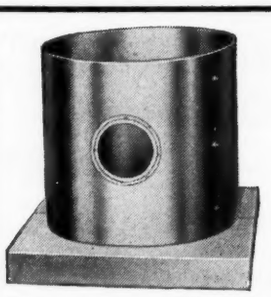
ALL OTHER burners push air in BEHIND oil vapor. AIRE burners balance air in correct volume behind, ahead and through oil vapor.

Ten other patent-pending improvements.

Immediate delivery ½ to 5 gal. sizes. Get your franchise NOW.

AIRE BURNER WORKS

646-8 McALLISTER AVE. WAUKEGAN, ILL.



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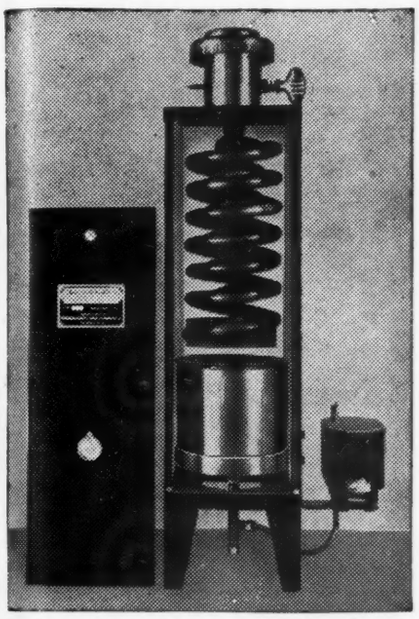
Adjustable

FIRE BOX

Insulation back-fill unnecessary when used in wet base and forced warm air oil burning units. This one chamber is adjustable from 1:00 to 2:25 G.P.H.

Petroleum Equipment Mfg. Co., P. O. Box 1533, New Haven, Conn.

HOT WATER COSTS
Go Down When
HANSON-GATES WATER HEATER
GOES IN!



Just think! Continuous 24 hour operation on one gallon No. 1 oil. Here's truly low cost water heating satisfaction. In its more than eighteen years devoted to the manufacturing of water heating equipment HANSON-GATES has brought perfection to the field of oil-fired heaters. Line up with Hanson-Gates today.

Type S-KV, as illustrated, is used on 30 and 40 gallon water storage tanks. The oil feeds the valve from 55 gallon tank or larger. All types equipped with double copper coil, insulated cabinet with 4½ inch burner, vaporizing type.

Type S-KVA automatically governs temperature of water going from high to low as water reaches desired temperature.

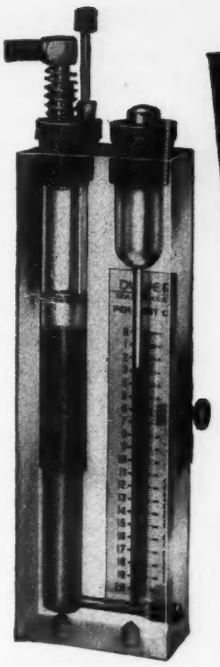
Type S-KS is equipped with 3 gallon metal tank and is used where larger tank would prove impractical.

Type S-KVA TWIN (automatic) is used on 60-80 gallon water storage tanks, ideal for two-family homes, etc.

*Sold through Plumbing and Heating and Oil Burner Jobbers.

Pacific Coast Territory available. Please write for information.

Hanson-Gates Mfg. Co., Inc.
174 LOWELL ST. READING, MASS.



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Scientific Accuracy IN ANYONE'S HANDS

DWYER TRANSPARENT
CO_2 INDICATOR

Dwyer Transparent CO_2 Indicator (Model 800) insures *true* readings, even by inexperienced operators, because: (1) trapping of over-pressure is impossible due to Dwyer expansion bladder feature and (2) no pre-absorption error—test sample sealed from active absorbent solution. Its simple design, unbreakable transparent body, durable construction gives longer life, and a higher degree of dependable, scientific accuracy. Also available in Combination Test Set with Draft Gage and Thermometer in handy carrying case.

F. W. Dwyer Mfg. Co.
315 South Western Avenue, Chicago 12, Ill.

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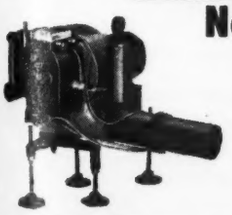
Automatic Oil-Burning
Furnaces—Water Heaters

J. L. GILLEN CO.
DOWAGIAC, MICHIGAN

★ RAYFIELD AUTOMATIC ★



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REDUCE HEATING COSTS... INCREASE YOUR PROFITS

Burn No. 5 heavy fuel oil. Self contained, all electric. Self-lubricating. Many new exclusive features. Write for full details

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C. L. RAYFIELD CO.
2010-18 S. Halsted St., Chicago 8, Ill.

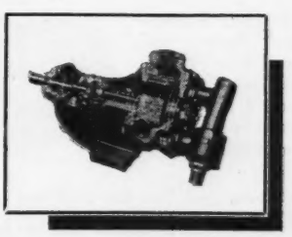
If your men are forced to stand around like this-because your pumps are slow and inefficient....

Then-
DON'T WASTE TIME!
Investigate

VIKING ROTARY PUMPS
Today!

It's Viking for fast and positive delivery, self-priming, no pulsation, dependable long life.

Write for special Bulletin Series 1500-EE. It will be sent to you by return mail.



See Our Catalog In SWEETS

VIKING PUMP COMPANY
CEDAR FALLS, IOWA

Industry Groups

Activities of local and national industry associations are reported monthly in this department. Secretaries are invited to send reports of their Groups' activities to reach the editor by the 20th.

OHI of New England Conducts Survey of Local Oil Conditions

BULLETIN NO. 295, issued by Oil-Heat Institute of New England, Boston 15, Mass., contains the result of a survey of the major suppliers for the area made by Fred N. Beckwith, the group's executive secretary.

The composite picture of the situation reveals that major suppliers in New England are not accepting new jobber accounts on kerosene or No. 2 fueloils, but that where a major supplier operates at retail he is accepting such retail accounts as he is able to procure. Suppliers indicate they will accept wholesale contracts from old customers for distillate fuels only to the extent of the gallonage supplied during the past heating season.

All majors, the survey shows, are refusing to accept any business on No. 5 or 6 heavy fueloils and there may be some cases where suppliers apparently are oversold and contracts will not be renewed by the regular supplier of an account.

The above conditions are not represented as being an accurate picture of each individual company, but the Bulletin contends it is an accurate, overall picture of the situation as the major suppliers in New England view it.

Pointing out that inadequate fueloil storage is one of the serious problems to be confronted, the association urges all jobbers to completely fill his storage during the Summer, and make some arrangement with his supplier to assist, if possible. It is also suggested that letters be written to consumers asking cooperation in filling their tanks in advance of the heating season.

Wisconsin Association Meets, Discusses Fueloil Situation

MEMBERS ATTENDING the regular meeting of the Wisconsin Oil-Heat Association, Inc., Milwaukee, Wis., held at the Wisconsin Hotel, June 5, heard a discussion on publicity being given to the fueloil situation as it is expected to affect the area next heating season. The session considered possible effects of the situation on oil distributors, oilburner dealers and the public in general.

Reports were received from the membership, legislative and advertising committees and plans were anounced for the association's annual golf outing.

Steel Boiler Institute Holds 19th Annual Meeting

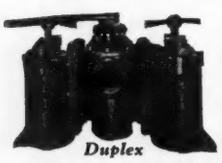
STEEL BOILER INSTITUTE held its 19th annual meeting at Lake Wawasee, Ind., on June 10 and elected three directors to serve terms of three years, and re-elected R. A. Locke, president. Speakers at the meeting were Charles L. Dunlop, Stevenson, Jordan & Harrison, Inc.; A. E. Hess, Oil-Heat Institute of America; Norman J. Radder, Plumbing & Heating Industries Bureau and Robert Gray, FUELOIL & OIL HEAT.

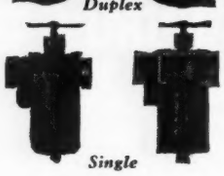
The industry is producing more boilers than at any time in its history, four months shipments for this year being almost 30% over the corresponding period in 1941, when the industry's previous highest production was reached. Manu-

KRAISSL
FILTERS
STRAINERS
PUMPS
Keep Fuel Oil Lines Open and Active

Year-in, year-out performance proves the skill of KRAISSL engineering design and the honesty of KRAISSL manufacture.

Class 72 Strainers and Filters





Single and Duplex types for suction or discharge service — any practical degree of filtration in units designed for low pressures as well as up to 500 lbs. hydrostatic test—easily removable filter basket insures quick cleaning.

Class 60 Heavy Oil Pumps

Standard equipment wherever independent pump and motor sets or booster pumps for pump-type burners are required.

Submit your fuel-line problems to KRAISSL engineers—literature and prices on request.

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KRAISSL THE KRAISSL COMPANY
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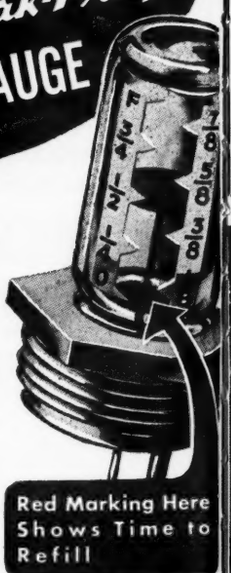
Easier to Install! Safe for Pressure Filling! The NEW, Guaranteed K-G Leak-Proof TANK GAUGE

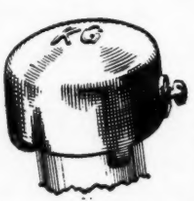


K-G Gauges have a new indicator cap that can be installed with the fingertips.

K-G Gauges can be installed in full or empty tanks. They are visible from all angles.

K-G Gauges are furnished with 1½" or 2" thread without extra cost.

Red Marking Here Shows Time to Refill



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CAST ALUMINUM
Simply slip onto pipe and lock with screw. No thread is required. Has a fine rust-proof screen.

EXPORT DEP'T.: 44 WHITEHALL ST., N. Y., U.S.A.
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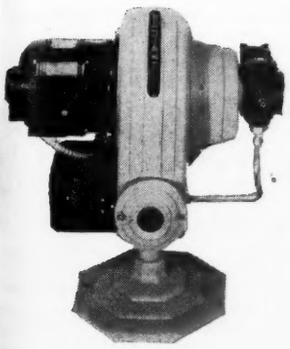
King Gauge & Mfg. Co.
114 WALLACE ST · NEW HAVEN 11, CONN.

BURN CATALYTIC OILS EASILY
with NO SOOT and NO TROUBLE!
Sell and install the New, Improved

RADIANT
• OIL BURNER •



4 sizes . . . 1 to 20 gph

Low in Cost . . . Dependable . . . A profit-maker for dealers . . . easy to service because it was designed to reduce service costs and increase efficiencies.

"YOUR FUTURE IS BRIGHT WITH RADIANT!"

Literature on Request.

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MIXING VALVE

The Yula Mixing Valve perfectly tempers hot water to a predetermined temperature for domestic use at lowest cost.

It "tops" them all.

Write to Dept. F7

Yula
WATER HEATERS, INC.
166 WEST 225 ST. • NEW YORK 63

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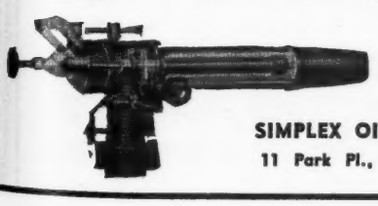
Since SIMPLEX OIL HEATING CORPORATION SIMPLEX OIL BURNING SYSTEMS REG. TRADE MARK 1910

Simplex Oil Burning Systems



RESULTS COUNT!

SIMPLEX OIL HEATING CORP.
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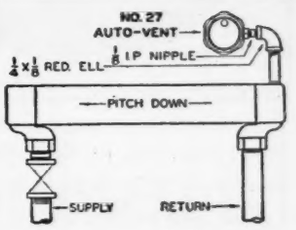
HOW TO GET PERFECT CIRCULATION in Hot Water Radiators and Convectors

AUTO-VENT AIR ELIMINATORS REALLY DO A JOB!

As air accumulates in radiators or pipes, it is AUTOMATICALLY VENTED when you use these inexpensive No. 27s. Your customer gets better heating and saves fuel.

AUTO-VENTS work equally well on convectors, baseboard radiation, panels, radiant heating coils, etc. — NO AIR CHAMBER REQUIRED. Good for pressures to 50 lbs. *See your jobber, or write us direct.*



SIMPLE AS A-B-C

Detailed drawing of No. 27 Auto-Vent Air Eliminator operating on convector radiator. Auto-Vents used on other types of jobs are just as easily installed — and no attention required.

MAID-O-MIST INC.
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AUTOMATIC HUMIDIFIERS FOR ALL TYPES OF HEATING SYSTEMS

Parakem
SLUDGE REMOVER
FOR GREATER PROFITS!

The Fuel Oil Conditioner Backed By More Than 100,000,000 Gallons of Fuel Oil Experience

Gives you repeat business—your customers need Parakem to prevent sludge deposits in the storage tank, lines and oil burner. Parakem improves atomization, allows quicker starting — results in a brighter, cleaner flame.

Parakem is specially priced for resale by dealers at good mark-up.

Sold in one and 5 Gallon Cans —15, 30 and 53 Gallon Drums

Write for complete details and prices **TODAY!**

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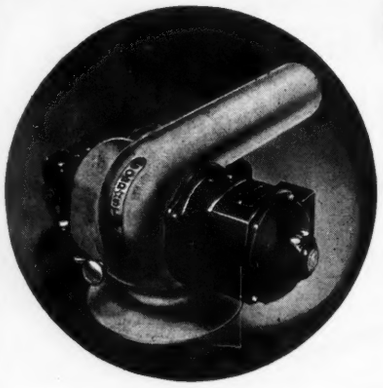
75 Bridgewater Street Brooklyn 22, N. Y.



GOLD STAR

For Prompt Delivery!

AT

Reduced Prices

← Model J-1 to 5 Gals.

Gold Star Oil Burner Mfg. Co., Inc.

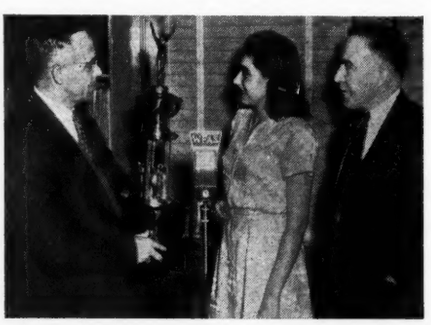
146-150 Warburton Ave. Yonkers, N. Y.

facturers reported, at the meeting, that production is being held back by lack of steel plate, and that the record production is being achieved by continuous operation of their plants without any serious labor disputes. Stocks in manufacturers' plants, it was revealed, are low at present, but it is expected that delivery schedules can be maintained if steel mills continue to meet their deliveries on steel plate.

Westchester Oil Association Awards High School Trophy

CLIMAXING A CONTEST, Westchester Oil Trade Association awarded to the students of White Plains High School a trophy for radio achievement. The presentation was made in a special program on station WFAS, White Plains, N. Y., on June 8. Harold E. Hollister, Westchester County Superintendent of Schools, awarded the trophy to the group whose original presentation, "Without Prejudice," was adjudged the best. Engraved medallions were presented to individual members of the winning cast.

The contest, originated by S. Frederic Auerbach Advertising Agency, New York City, for the association, enabled high school students to produce their own radio shows. Mr. Hollister and Frank Kluge, radio director, Westchester County Teachers' Association, both acclaimed



Marion Gordon *accepts trophy for White Plains High School from Superintendent Harold E. Hollister, while Thomas A. Brown, Association president, watches.*

the contest as a vital step forward in educational progress. Thomas A. Brown, president of the association, also made an address at the presentation ceremonies.

Since the start of the contest on March 23, ten high schools offered presentations on "Westchester Youth Speaks" radio programs.

Washington Chairmen Named In API Industry Program

LESTER SCOTT, director, Oil Htg. Div., Merchants & Manufacturers Assn., Washington, has been appointed vice chairman in charge of the committee on industry participation for the petroleum industry's public relations program for the District of Columbia. S. A. Parks, chairman, API District Committee, made the announcement.

Vice chairmen also were appointed to head three other operating committees, as follows: Speakers, Robert Hogan, Ethyl Corp.; Advertising, George Butler, Standard Oil Co. of N. J.; Finance, R. D. Myers, Shell Oil Co.

Consumer Advertising Discussed At I-B-R Semi-Annual Meeting

THE CAMPAIGN of consumer advertising of the Institute of Boiler and Radiator Manufacturers, New York 17, N. Y., was the chief topic at the Institute's semi-annual meeting held May 20 to 22 at Westchester Country Club, Rye, N. Y. Plans for continuation of the campaign in 1947

Sundstrand

All Electric

OIL BURNER

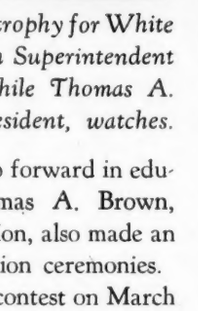
Tested and Proven By Time and Performance

For Dealers Who Want Completely Satisfactory Service

SUNDSTRAND ENGINEERING CO.

ROCKFORD, ILL.

"QUALITY BURNERS FOR 26 YEARS"



ECONO

Low Water Cut-Offs are all equipped with mercury tube switches, therefore, always dependable.

ECONO means Economy. Very reasonably priced.

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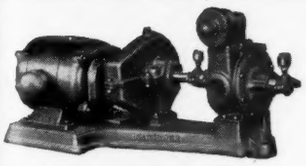
PUMPS for the PETROLEUM INDUSTRY



Capacities to 750 GPM.
Pressures to 300 psi.

BLACKMER ROTARIES

— are self-adjusting for wear —

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BLACKMER PUMP CO.—2170 Century Ave.—Grand Rapids 9, Michigan

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Dealers • Salesmen • Estimators!

BEACON RADIATION REFERENCE BOOK AND HEAT LOSS GUIDE

This pocket-size book shows the required radiation for all rooms of ordinary size with from one to three windows, one to three exposures, and every combination of walls exposed. Figures are based on calculations of the space by the Btu method on a 0° to 70° design temperature. A table shows corrections for other design temperatures.

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Because of increased production, several exclusive Instant Heat Oil Burner dealerships are now available. Write, wire or phone immediately for details.

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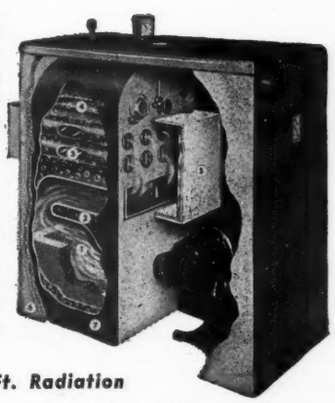
8010—17th Ave., Brooklyn 14, N. Y.

THE NEW YORKER

HERE'S the STEEL BOILER for LONG LIFE AND QUIET OPERATION

ALL STEEL, RESIDENCE
OIL BURNING BOILER

The tubes of this boiler are extra heavy. The tube wall thickness is one quarter inch, the same thickness as the boiler plate. This makes tube replacement unnecessary and gives whole boiler exceeding long life.



Immediate shipment now, complete with jackets, in any quantity. Anticipate your future needs by ordering now to assure your share of NEW YORKERS for the coming heating season.

400 to 1100 Sq. Ft. Radiation

BUILT TO EXCEL IN DEPENDABILITY, LONG LIFE, AND LOW OPERATING COST

TITUSVILLE SALES COMPANY INC.

ONLY OFFICE
50 WEST 50th ST., NEW YORK
Circle 6-2861

FORCED AIR *Floor* Furnace

★ Model M 1047 F

Oil HEAT

★ Listed by Underwriters Laboratories

The HEATER with the LONG LIFE

50,000 B.T.U.'s! Manual Control!
10-inch Vaporizing BREESE Burner!
Orders Accepted for Early Deliveries

Some Territories Still Available for Established Warehousing Distributors

The CASCADE MFG. CO.
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Please send me more information about HEWITT Oil Floor Furnaces ☐ Dual Heaters ☐ Space Heaters ☐

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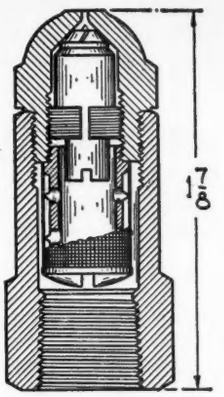
OIL HEATERS

HAGO "H" TYPE AVAILABLE AGAIN!

Discontinued during the war because of space and material limitations, we are pleased to announce that, with the additional facilities offered in our new plant, we can furnish the oil burner industry with a finer "HOLLOW CONE" nozzle than ever before.

HAGO "H" TYPE nozzles have been extensively tested for use with specially designed burners and combustion heads. CO_2 readings up to 15.2%!

Available from .75 to 2.50 g.p.h. inclusive.



HAGO PRODUCTS

1281 SPRINGFIELD AVE., IRVINGTON 11, N. J.

and suggestions for broadening its scope in 1948 were presented by D. L. Paus, Perrin & Paus, advertising agency handling the campaign.

R. E. Ferry, general manager of the Institute, reported on number of requests for copies of the booklet, "Enjoy Better Living With Radiant Sunny Warmth," which forms the basis of the campaign, in which wholesalers will be urged to participate more strongly.

Other subjects discussed included the I-B-R Research Program at the University of Illinois, a short course for contractors to be held at Navy Pier, Chicago, in September, plans for revision of I-B-R Installation Guide No. 1, and publication of a new Guide.

Warren Harris, special research assistant professor, University of Illinois, reported on tests conducted in the Research Home on RC radiant convector baseboard.

Forecast Big Heating Show At New York Next Winter

EARLY FORECASTS for a heating and ventilating show to rival the size of the Cleveland exposition have been made by the exposition company. The 8th International Heating & Ventilating Exposition, to be held under the auspices of the American Society of Heating & Ventilating Engineers at Grand Central Palace, New York, is scheduled for the week of February 2-6, 1948. These shows, formerly held every second year, were announced as annual events against the opposition of a number of trade groups which had planned to hold individual industry shows in what would have been the off years.

Officials report that 370 spaces had been engaged within three weeks of the initial announcement of the 8th exposition, and they predict that all space will be sold before the opening. This is the first heating show to be held in the New York area for ten years.

API Meeting Considers Challenge to Oil Industry

THE MID-SEASON meeting of the Marketing Division, American Petroleum Institute, held June 30 and July 1 in Minneapolis, Minn., opened with a welcome from Gov. Luther W. Youngdahl. Both an open meeting and business session were held during which oil marketers participated in discussions of timely and vital problems.

Walter S. Hallahan, president, Plymouth Oil Co., Pittsburgh, Pa. and chairman, National Petroleum Council, asked in his talk to the meeting, "Is the petroleum industry facing a challenge now?" in which he covered current factors that are affecting the supply and demand position of finished petroleum products.

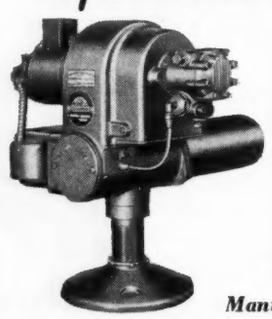
Another talk, delivered by Eugene Holman, president, Standard Oil Co. (N. J.), discussed "What is the petroleum industry doing to meet this challenge?" His address dealt with petroleum supply problems as they face various segments of the industry, placing emphasis on the need for sound economics and efficiency.

(See article starting on page 63.)

Jacobs Re-elected Chairman Of Atlantic Oil Conference

THE ANNUAL MEETING of the Atlantic Coast Oil Conference, held June 5 in New York, followed the recommendations of the Committee on Nominations and re

dependable performance



In Designed Units

For dependable, quiet performance and long life . . . specify HOWELL CONTROLLED FLAME OIL BURNERS when buying Complete Units. Your favorite Oil-Fired package unit will operate at its highest efficiency when equipped with a HOWELL.

Mention Unit make and Model number for information on flange Mount and special length Tubes.

Manufacturers inquiries invited.

H. A. HOWELL OIL BURNER CO., DIXON, ILL.

CLEAN SWEEP

This ALL PURPOSE Soot Remover remarkably cleans ALL kinds of jobs, pressure, rotary, vaporizing oil burners.

Approved by oil burner manufacturers and testing laboratories. Developed especially for the vaporizing pot type burner units. Will not clog holes, leave a residue, or overheat vital parts.

LOOK FOR THE BROOM ON THE PACKAGE

SEE YOUR JOBBER OR WRITE US.

CLEAN SWEEP CO. P. O. BOX 156 SO. LANSING 9, MICH.

Yes Sir!

when the oil is low ORDEROIL will tell you so. . . . .

FOR NEW AND PRESENT SYSTEMS

•

SIMPLICITY AS TO INSTALLATION

•

INEXPENSIVE AS TO COST

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EXCLUSIVE TERRITORY AVAILABLE

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WRITE FOR SPECIAL INTRODUCTORY PRICE

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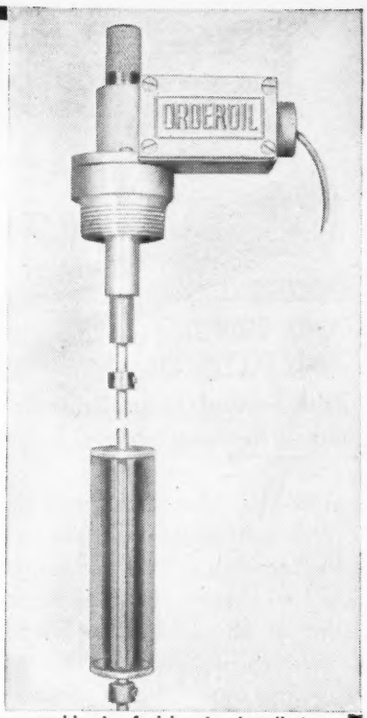

ORDEROIL is an inexpensive and simple device that eliminates the discomfort and annoyance of empty fuel tanks on domestic and comparable size fuel burning installations. It eliminates the use of gauges on the fuel oil tanks.

When only a predetermined amount or gallons of oil remain in the fuel tank, **ORDEROIL** flashes this fact to the occupant. A red signal light on kitchen or adjacent wall signals—**ORDEROIL**. The reminder to order oil is continous until the fuel oil supply is replenished.

ORDEROIL eliminates these trips to the basement.

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Write for literature and trade price

The Original. Still the Best. Hundreds of Thousands in Use. • Holds the draft constant in the fire box. • Scientific draft control for the smallest to the largest jobs. • Stove, domestic, and commercial sizes from 4" to 24" in diameter. • Industrial sizes from 24" x 24" to 5' x 12'.

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TANKLESS WATER HEATERS

NOW HAVE EVERY MODERN FEATURE EMBODIED IN THE DESIGN FOR SAFE, ECONOMICAL, DURABLE & LOW COST OPERATION.

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The OIL BURNER with an INTERNATIONAL REPUTATION

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Our 75th Year

75 YEARS! No wonder the Ray line of oil burners is so much more complete: Types for Industrial, Commercial, Domestic or Marine applications; for fully automatic, semi-automatic or manual control; sizes from 1 to 1000 horsepower... truly, An Oil burner for Every Purpose!

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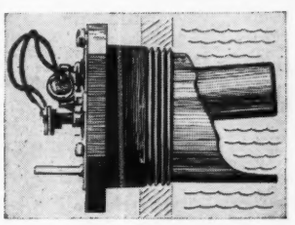
BRONZE CONTROLS

for Permanent Protection



Low Water Cutoffs and Pressure Controls

Available In Single or Combination Units

Write for further information

NEWARK CONTROLS BLOOMFIELD, NEW JERSEY

HAYWARD OIL BURNERS

ROTARY and PRESSURE ATOMIZING TYPES

Dealer and Distributor Inquiries Invited.

HAYWARD MFG. CO., INC.

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SOMETHING BIG IS COOKING AT

SILENT KORTH OIL HEAT

ECKHART MANUFACTURING CO.
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Rajah
HAND CRIMPING TOOL

IT CUTS AND STRIPS AND ALSO CRIMPS
Rajah Terminals to ignition cable without the use of solder or any other tools

The RAJAH COMPANY, Bloomfield, N. J.

elected Lionel L. Jacobs, Philadelphia, chairman and Clyde G. Morrill, secretary. The only changes suggested by the committee added H. L. Schwartz to the executive committee and H. B. VanCleve to the nominating committee.

The Conference heard committee reports and approved the treasurer's and secretary's report as rendered. Mr. Morrill presented a suggested program for 1947-48, which is aimed at promoting mutual confidence between large and small companies, promoting liaison efforts with the Public Relations Operating Committee of the Petroleum Industry, furnishing reports to all members on product supply, and planning a long-range approach to uniform efficient performance of oilburner installations. Interchange of information on labor relations and participation in the program of the Marketing Division, API, and National Petroleum Council also was urged.

OHI of St. Louis Elects Officers, Approves By-Laws

THE ANNUAL MEETING of the Oil Heat Institute of St. Louis was held May 14 at the Forest Park Hotel. New officers elected are George Fliehman, president; A. Jack Becker, vice president; George Koertel, secretary and treasurer. R. Bretsnyder, William Raith, J. Seidel and R. A. Tierney, with the other officers, comprise the Board of Directors. A new set of by-laws was approved.

NYOHA Discusses Oilburner Inspections With Officials

ON APRIL 21, a delegation from the New York Oil Heating Association, Inc., Long Island City 1, N. Y., met with members of the Bureau of Combustibles to discuss some of the difficulties that have arisen as a result of departmental directives to oilburner inspectors. Report of the meeting was held up until a similar meeting was arranged on June 10 with Fire Department officials.

The purpose of the meeting was achieved when agreements were reached to speed up issuance of permits and inspections of installations.

As a result of the meetings, the Association received approval to issue post-cards, which are to be attached to applications for inspection. After tank and pipe tests are completed, the Fire Department will indicate on the card whether or not a permit has been issued or if a violation exists. This is accomplished by check-marks on the post-cards, which are addressed to the dealer concerned, and provide him with quick and specific information each installation inspected.

ACRMA Resolution Calls For Heating Show Every Two Years

DIFFICULTIES faced by exhibitors in the Heating and Ventilating Show and the Air Conditioning Exposition, being held in Cleveland and New York within a few days of each other early in 1948, were aired at the annual meeting of the Air Conditioning and Refrigerating Machinery Association, Washington, D. C., held recently in Hot Springs, Va. A resolution adopted unanimously points out the inconvenience and expense involved in duplicating exhibit personnel and equipment for the many exhibitors who will be represented in both shows.

OIL SOOT E-Z DESTROYER

WAR ON FUEL OIL WASTE

Simply spray E-Z, and all oil soot vanishes instantly from fire chamber and flues. Increases efficiency of oil. One trial will convince you. "EASY" TO USE . . . ECONOMICAL TOO!

Makes satisfied customers.
DISTRIBUTORS: *Write for fine proposition.*

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Enclosed find check ( ) money order ( ) Send the following prepaid:

No. 1 pkg. $1.00
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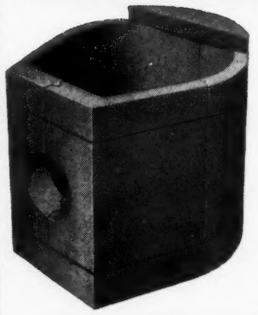

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THOUSANDS OF SATISFIED CUSTOMERS SINCE 1934

QUALITY + ECONOMY

See Your Jobber or Write to Us

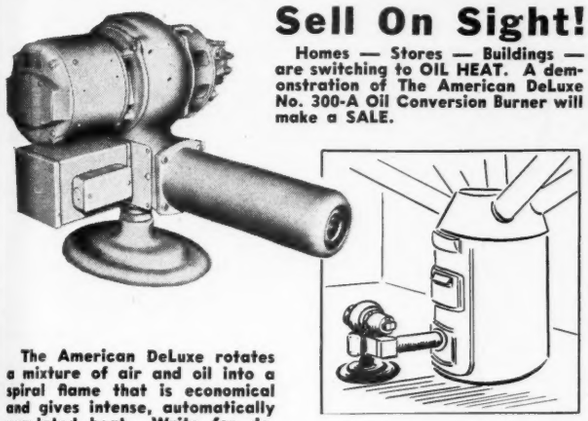
Monogram Combustion Chamber Co.
PHILADELPHIA 4, PA.

AMERICAN ★ DeLuxe ★

OIL Conversion BURNERS

Sell On Sight!

Homes — Stores — Buildings — are switching to OIL HEAT. A demonstration of The American DeLuxe No. 300-A Oil Conversion Burner will make a SALE.



The American DeLuxe rotates a mixture of air and oil into a spiral flame that is economical and gives intense, automatically regulated heat. Write for descriptive folder.

It is approved by Underwriters Laboratories Inc.

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WHOLESALERS
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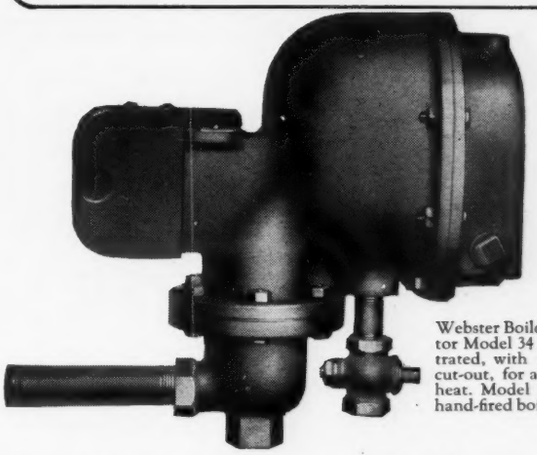
601 E. 5th St. New Albany, Ind.

Webster Boiler Protector Now—Immediate Delivery



Webster Boiler Protector Model 34 C-1 illustrated, with electrical cut-out, for automatic heat. Model 34 is for hand-fired boilers.

Here—now! . . . Protection against accidental low water in low pressure heating boilers. The service-proven Webster Boiler Protector—the *only* protector incorporating a powerful hydraulically actuated operating mechanism to deliver maximum capacity instantly—is again available in quantity. Phone or write Webster Representative today for quick delivery.

Bulletin on request, address Dept. F-7.

WARREN WEBSTER & Co., Camden, N.J.
Representatives in principal Cities : : : Est. 1888
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BY THE MAKERS OF
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HEATING SYSTEMS

WEBCO TRI-POD Refractory Baffle

PRODUCED BY McLEOD & HENRY CO.

The WEBCO Tripod Baffle is fully guaranteed, is flexible, saves fuel. The removable legs are available in either No. 1 size for chambers up to 12" diameter or No. 2 size for chambers up to 14".

WRITE DEP'T. 61 FOR DETAILS.

A. R. WEBBER CO., INC.
780 STATE ST.
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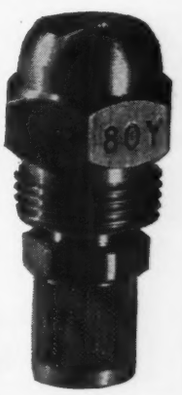
EVERYTHING FOR THE OIL BURNER TRADE

Ace Nozzles



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Ace Cooperating Engineers
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SINCE 1922

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*Formerly manufactured by us as MARINE Oil Burner.

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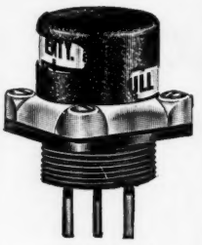

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OIL TANK GAUGES!

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- Easy to install
- Underwriter approved
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MAILING LIST
Catalogs to be issued
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ATLANTIC
BURNER SUPPLY CO., INC.

DEGREE DAY TABLES

ONE MONTH ONLY					SEASON TO DATE (Sept. 1 to May 31)			
Normal	May 1946	May 1947	Percent Change*		Normal	1946	1947	Percent Change
221	312	281	+27.1	Albany	6587	6778	6531	— 0.8
32	19	43	+34.4	Atlanta	2999	2753	2922	— 2.6
99	73	126	+30.3	Baltimore	4509	4016	4147	— 8.0
248	237	286	+15.3	Boston	5853	5710	5415	— 7.5
351	312	376	+ 7.1	Buffalo	6805	6460	6450	— 5.2
259	264	359	+38.6	Chicago	6205	6086	6269	+ 1.0
132	99	149	+12.9	Cincinnati	4993	4410	4917	— 1.5
255	349	283	+11.0	Cleveland	6094	5659	5852	— 4.0
14	18	11	—21.4	Dallas	2378	2103	2475	— 4.1
271	405	292	+ 7.4	Denver	5784	5502	5894	— 1.9
165	251	270	+63.6	Des Moines	6356	6118	6452	+ 1.5
252	273	352	+40.0	Detroit	6502	6088	6280	— 9.7
263	278	381	+44.8	Grand Rapids	6655	5941	6367	— 4.4
216	262	273	+26.4	Hartford	6037	6168	5809	— 3.8
409	458	342	—16.4	Helena	7600	7058	7887	+ 3.7
12	0	0	..	Houston	1333	1188	1489	+11.7
155	188	188	+21.2	Indianapolis	5459	5337	5399	— 1.1
106	136	127	+19.8	Kansas City	4971	4362	4869	— 2.1
104	126	67	—35.5	Los Angeles	1362	1417	1335	— 2.0
92	89	137	+48.9	Louisville	4421	3926	4277	— 3.3
340	385	474	+39.4	Milwaukee	6955	6991	7170	+ 3.0
255	320	359	+40.7	Minneapolis	7898	7666	7888	— 0.2
1	0	0	..	New Orleans	1208	1166	1380	+14.2
176	154	216	+22.7	New York	5270	4885	4833	— 8.3
152	198	214	+40.7	Omaha	6074	5572	6142	— 1.1
117	113	165	+41.0	Philadelphia	4732	4878	4693	— 0.9
170	183	183	+ 7.6	Pittsburgh	5427	5284	5267	— 3.0
375	415	426	+13.6	Portland, Me.	7128	7572	7129	..
241	167	109	—54.7	Portland, Ore.	4214	3830	4161	— 1.3
245	206	243	..	Providence	5946	5668	5335	—10.3
88	120	115	+30.6	St. Louis	4602	4342	4650	— 1.0
233	252	133	—24.8	Salt Lake City	5568	5640	5721	+ 2.7
252	308	231	— 8.3	San Francisco	2569	3113	2971	+15.6
485	548	674	+39.0	Sault Ste. Marie	8901	8778	8943	+ 0.4
304	176	163	—46.4	Seattle	4560	4422	4417	— 3.2
226	268	304	+34.5	Toledo	6202	6079	6178	— 0.4
104	77	121	+16.3	Washington	4582	4028	4036	—12.0

*Compared with normal.